2000
AMENDMENTS
to the
Program of Studies: Senior High Schools

1. **Replace** front-end pages i to v and Preamble pages 1 to 6 with **revised** front-end pages i to v and Preamble pages 1 to 6.

2. INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)
   - **Insert new** ICT divider, following the Fine Arts section.
   - **Insert new** ICT title page, following the ICT divider.
   - **Insert new** ICT pages 1 to 42, following the ICT title page.

3. LANGUAGE ARTS
   - **Replace** Français 10–20–30, page 1, with **revised** Français 10–20–30, page 1.
   - **Replace** French Language Arts 10–20–30, page 1, with **revised** French Language Arts 10–20–30, page 1.

4. MATHEMATICS
   - **Replace** Mathematics title page, following the Mathematics divider.
   - **Remove** Mathematics 30, pages 1 to 20.
   - **Replace** Mathematics 13–23–33, pages 1 to 24, with Mathematics 23–33, pages 1 to 19.

5. PERSONAL DEVELOPMENT
   - **Replace** Personal Development title page, following the Personal Development divider.
   - **Replace** Physical Education 10–20–30, pages 1 to 12, with **new** Physical Education (K–12), pages 1 to 33.

Note:
- **GREEN CERTIFICATE PROGRAM**: Provincial implementation of the Green Certificate Program is scheduled for September 2000. The program of studies will be distributed to schools this summer 2000. No changes are anticipated from the September 1999 Pilot version.
- **SOCIAL STUDIES 10–20–30 and 13–23–33**: Minor revisions are being made to the current programs of study to ensure accuracy and correctness. These programs of study will be distributed to schools this summer 2000.

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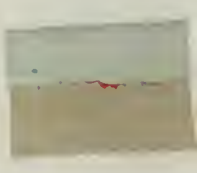

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PROGRAM *of* STUDIES

Senior High Schools

This Program of Studies is issued under the authority of the Minister of Learning pursuant to section 25(1) of the *School Act*, Statutes of Alberta, 1988, Chapter S–3.1 with amendments in force as of May 19, 1999.

Alberta
LEARNING

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PROGRAM OF STUDIES: SENIOR HIGH SCHOOLS

2000 CONTENTS

PREAMBLE

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Program Foundations 2
Religious and Patriotic Instruction 4
Learning Resources 5

Course **All programs of study are available for viewing and downloading at <http://www.learning.gov.ab.ca> under Early Childhood Services to Grade 12 Education, Curriculum.**	A. Program Rationale and Philosophy	B. General Learner Expectations	C. Curriculum Standards/ Specific Learner Expectations
CAREER AND TECHNOLOGY STUDIES			
Career and Technology Studies	1997[1]		
Career and Technology Studies [applies to all 22 strands]	1999		
Agriculture	1999	1997	
Career Transitions	1999	1999	
Communication Technology	1999	1999	
Community Health	1999	1997	
Construction Technologies	1999	1997 pp. 11, 18 1998	
Cosmetology Studies	1999	1997	
Design Studies	1999	1997	
Electro-Technologies	1999	2000	
Energy and Mines	1999	1997	
Enterprise and Innovation	1999	1997	
Fabrication Studies	1999	2000	
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Financial Management	1999	2000	
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Tourism Studies	1999	1997	
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Art [general]	1986	1986	
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Art 11–21–31	1986	1986	1986
Drama 10–20–30	1989	1989	1989
Choral Music 10–20–30	1991	1991	1991
General Music 10–20–30	1994	1994	1994
Instrumental Music 10–20–30	1991	1991	1991
INFORMATION AND COMMUNICATION TECHNOLOGY	2000	2000	2000

The dates in the grid indicate the most current and up-to-date sections in each program of studies.

[1] Program information only.

Course **All programs of study are available for viewing and downloading at <http://www.learning.gov.ab.ca> under Early Childhood Services to Grade 12 Education, Curriculum.**	A. Program Rationale and Philosophy	B. General Learner Expectations	C. Curriculum Standards/ Specific Learner Expectations
INTEGRATED OCCUPATIONAL PROGRAM			
English 16–26–36	1992	1992	1992
Occupational Component 16–26–36	1992	1992	1992
Social Studies 16–26	1992	1992	1992
Mathematics 16–26 Science 16–26	Copies of the interim 1992 programs of study are available for purchase from the Learning Resources Distributing Centre.		
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English Language Arts	1981	1981	
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Communications 21a–21b			1978
Literature 21a–21b			1978
Reading 10	1987	1987	1987
English as a Second Language	1997	1997	1997
Français 10–20–30	2000❶		
French Language Arts 10–20–30	2000❶		
Ukrainian Language Arts	1990	1990	1990
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Mathematics 31	1995	1995	
Mathematics 23–33	1991	1991	1991
Mathematics 14–24	1990	1990	1990
NATIVE LANGUAGES			
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Special Projects 10–20–30	1995❶		
Work Experience 15–25–35	1995❶		
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Career and Life Management 20	1989	1989	1989
Occupations 10		1978	1978
Physical Education (K–12)	2000	2000	2000
SCIENCE			
Science (Vision Statement)	1994		
Science 10	1992	1992	1992
	Copies of the interim Science 10 program of studies, dated June 30, 1995, are available for purchase from the Learning Resources Distributing Centre.		
Biology 20–30	1998	1998	1998
Chemistry 20–30	1998	1998	1998
Physics 20–30	1998	1998	1998
Science 20–30	Copies of the interim Science 20–30 program of studies, dated June 30, 1995, are available for purchase from the Learning Resources Distributing Centre.		
Science 14–24	1994	1989	1989 pp. 7–8, 1994

❶ Program information only.

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Course **All programs of study are available for viewing and downloading at <http://www.learning.gov.ab.ca> under Early Childhood Services to Grade 12 Education, Curriculum.**	A. Program Rationale and Philosophy	B. General Learner Expectations	C. Curriculum Standards/ Specific Learner Expectations
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French as a Second Language	1992	1992 pp. 7–8, 1994	1992 pp. 12–14, 1994 p. 17, 1994 p. 18, 1996
German	1984	1984	1984
Japanese Language and Culture 10–20–30	1996	1996	
Latin	1986	1986	1986
Ukrainian	1983	1983	1983
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Anthropology			
Cultural and Physical Anthropology 30		1985	1985
Economics		1985	
Economics for Consumers 20			1985
Microeconomics 30			1985
Macroeconomics 30			1985
Geography		1985	1985
Local and Canadian Geography 20			1985
World Geography 30			1985
History			
Western Canadian History 20		1985	1985
Canadian History 20		1985	1985
Western World History 30		1985	1985
Philosophy			
Origins of Western Philosophy 20		1985	1985
Contemporary Western Philosophy 20		1985	1985
Philosophies of Man 30		1985	1985
Political Science			
Political Thinking 20		1985	1985
Comparative Government 20		1985	1985
International Politics 30		1985	1985
Psychology		1985	
Personal Psychology 20			1985
General Psychology 20			1985
Experimental Psychology 30			1985
Religious Studies		1985	
Religious Ethics 20			1985
Religious Meanings 20			1985
World Religions 30			1985
Sociology		1985	
General Sociology 20			1985
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SOCIAL STUDIES			
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Social Studies 13–23–33	1990	1990	1990 pp. 39–54, 1993

INTRODUCTION

Program of Studies

The *Program of Studies* identifies the outcomes for the core and optional learning components for Kindergarten to Grade 12. Content is focused on what students are expected to know and be able to do.

Though organized into separate subject, course or program areas, there are many connections across the curriculum. Students see the world as a connected whole rather than as isolated segments. Integrating across content areas, and providing ways for students to make connections, enhances student learning. The reporting of student progress should, nevertheless, be in terms of the outcomes outlined in courses of study for each subject area.

Within any group of students there is a range of individual differences. Flexibility in planning for individuals within a group is needed. Therefore, school organization and teacher methodology are not mandated at the provincial level and may vary from class to class and school to school in order to meet student needs.

For guidelines and regulations relating to school programs and organization for instruction, refer to the *Guide to Education: ECS to Grade 12*, available for viewing and downloading from the Internet. Print copies are available for purchase from the LRDC.

Basic Learning Resources

Alberta Learning authorizes a variety of resources to support the programs of study. Complete listings of all resources are to be found in the Learning Resources Distributing Centre (LRDC) *Buyers Guide*, or electronically through the:

- LRDC Internet web site at <http://www.lrdc.edc.gov.ab.ca>.

Resource listings can also be accessed through the:

- Authorized Resources Database at <http://www.learning.gov.ab.ca> under Early Childhood Services to Grade 12 Education, Students and Learning, Learning and Teaching Resources.

Internet Site

Information covering all areas of Kindergarten to Grade 12 education in Alberta, including curriculum and resources, can be found at <http://www.learning.gov.ab.ca> under Early Childhood Services to Grade 12 Education.

Organization is by Sites and Information, and thereafter by sections focusing on Students and Learning; Parents; Teaching; Funding; Education System; Technology; Transcript Requests; and Publications.

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PROGRAM FOUNDATIONS[1]

Vision

Optimizing human potential.

Mission

Alberta Learning's leadership and work with partners build a globally recognized lifelong learning community that enables Albertans to be responsible, caring, creative, self-reliant and contributing members of a knowledge-based and prosperous society.

Core Businesses

Basic learning:

- develop curriculum and set standards
- evaluate curriculum and assess outcomes
- certify teachers and learners
- fund school authorities
- support students with special needs.

By:

- being learner-focused
- establishing and maintaining effective partnerships and linkages
- being flexible, responsive and innovative
- providing system-wide planning, policy and information management
- evaluating performance and providing incentives
- promoting seamless transitions and lifelong learning
- ensuring system and fiscal accountability
- sharing information and achievements
- optimizing mobility and transferability.

Goals for Alberta's Learning System

The goals for Alberta's learning system outline government's ongoing aims and directions over the long term. To maintain a high-functioning society and prosperous economy, Alberta's learning system must:

- provide quality programs that are responsive, flexible, accessible, relevant and affordable
- enable learners to demonstrate high standards
- prepare learners for lifelong learning, work and citizenship
- develop and maintain effective relationships with partners
- operate responsively and responsibly.

These five goals support government's core businesses of people, prosperity and preservation and related goals.

Basic Education in Alberta—the Definition

A basic education must provide students with a solid core program, including language arts, mathematics, science and social studies. Students will be able to meet the provincial graduation requirements and be prepared for entry into the workplace or post-secondary studies. Students will understand personal and community values and the rights and responsibilities of citizenship. Students will develop the capacity to pursue learning throughout their lives. Students also should have opportunities to learn languages other than English and to attain levels of proficiency and cultural awareness which will help to prepare them for participation in the global economy.

---

[1] Excerpted from *Alberta Learning Business Plan 2000–03*, February 24, 2000. The plan is available from the Communications Branch or can be found at the Alberta Learning web site.

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Student Learning Outcomes

Students are expected to develop the knowledge, skills and attitudes that will prepare them for life after high school. A basic education will allow students to:

- read for information, understanding and enjoyment
- write and speak clearly, accurately and appropriately for the context
- use mathematics to solve problems in business, science and daily-life situations
- understand the physical world, ecology and the diversity of life
- understand the scientific method, the nature of science and technology, and their application to daily life
- know the history and geography of Canada and have a general understanding of world history and geography
- understand Canada's political, social and economic systems within a global context
- respect the cultural diversity and common values of Canada
- demonstrate desirable personal characteristics, such as respect, responsibility, fairness, honesty, caring, loyalty and commitment to democratic ideals
- recognize the importance of personal well-being, and appreciate how family and others contribute to that well-being
- know the basic requirements of an active, healthful lifestyle
- understand and appreciate literature, the arts and the creative process
- research an issue thoroughly, and evaluate the credibility and reliability of information sources
- demonstrate critical and creative thinking skills in problem solving and decision making
- demonstrate competence in using information technologies
- know how to learn and work independently and as part of a team
- manage time and other resources needed to complete a task
- demonstrate initiative, leadership, flexibility and persistence
- evaluate their own endeavours and continually strive to improve
- have the desire and realize the need for lifelong learning.

Standards for Student Learning

The Minister of Learning defines acceptable standards and standards of excellence for student achievement in consultation with Albertans. Employers are involved in specifying the knowledge, skills and attitudes needed in the workplace. Schools, school authorities and the Minister of Learning assess and report regularly to the public on a range of student learning.

The school's primary responsibility is to ensure that students meet or exceed the provincial standards, as reflected in the Student Learning Outcomes (outlined above), the Alberta Programs of Study, provincial achievement tests, diploma examinations and graduation requirements.

Education Delivery

Schools must engage students in a variety of activities that enable them to acquire the expected learnings. Schools have authority to deploy resources and may use any instructional technique acceptable to the community as long as the standards are achieved. Schools, teachers and students are encouraged to take advantage of various delivery options, including the use of technology, distance learning and the workplace.

Schools play a supportive role to families and the community in helping students develop desirable personal characteristics and the ability to make ethical decisions. Schools also help students take increasing responsibility for their learning and behaviour, develop a sense of community belonging and acquire a clearer understanding of community values and how these relate to personal values.

Students learn basic, transferable knowledge, skills and attitudes in school. Schools, in co-operation with employers, provide opportunities for students to develop and practise

employability skills. The Minister of Learning provides credit for off-campus learning that is approved and accepted by the school and the employer. Government works with schools, employers and post-secondary institutions to help young people make a smooth transition to work and further study.

RELIGIOUS AND PATRIOTIC INSTRUCTION

The following section of the *School Act* focuses on religious and patriotic instruction. It is cited here for the information of administrators and teachers.

SECTION 33(1) A board may

(a) prescribe religious instruction to be offered to its students;

(b) prescribe religious exercises for its students;

(c) prescribe patriotic instruction to be offered to its students;

(d) prescribe patriotic exercises for its students;

(e) permit persons other than teachers to provide religious instruction to its students.

(2) Where a teacher or other person providing religious or patriotic instruction receives a written request signed by a parent of a student that the student be excluded from religious or patriotic instruction or exercises, or both, the teacher or other person shall permit the student

(a) to leave the classroom or place where the instruction or exercises are taking place for the duration of the instruction or exercises, or

(b) to remain in the classroom or place without taking part in the instruction or exercises.

1988 cS–3.1 s33;1990 c36 s16

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LEARNING RESOURCES

Policy

Alberta Learning selects, acquires, develops, produces, translates and authorizes the best possible instructional materials for the implementation of approved programs of study.

Learning Resource Categories

In terms of provincial policy, learning resources are those print, nonprint and electronic software materials used by students or teachers to facilitate learning and teaching. Many learning resources, both publisher-developed and teacher-made, are available for use in implementing elementary, junior high and senior high programs. Decisions about the selection and use of resources are a local matter and should take into account student skill levels, interests, motivations and stages of development.

Alberta Learning authorizes learning resources in three categories:

- basic student learning resources
- support student learning resources
- authorized teaching resources.

Authorization indicates that the resources meet high standards and can contribute to the attainment of the goals of the program. However, the authorization of resources does not require their use in program delivery. Under section 44 (2) of the *School Act*, school boards may approve materials for their schools, including resources that are withdrawn from the provincial list. Many school boards have delegated this power to approve resources to school staff or other board employees under section 45 (1) of the *School Act*.

Basic Student Learning Resources

Basic learning resources are those student learning resources authorized by Alberta Learning as the most appropriate for addressing the majority of outcomes of the course(s), substantial components of the course(s), or the most appropriate for meeting general outcomes across two or more grade levels, subject areas or programs as outlined in provincial programs of study. These may include any resource format, such as print, nonprint, computer software, manipulatives or video.

In exceptional circumstances, a teacher resource may be given basic status.

Support Student Learning Resources

Support learning resources are those student learning resources authorized by Alberta Learning to assist in addressing some of the outcomes of course(s) or components of course(s); or to assist in meeting the outcomes across two or more grade levels, subject areas or programs as outlined in the provincial programs of study. These may include any resource format, such as print, nonprint, computer software, manipulatives or video.

Authorized Teaching Resources

Authorized teaching resources are those teaching resources produced externally to Alberta Learning (for example, by publishers) that have been reviewed by Alberta Learning, found to meet the criteria of review and to be the best available resources to support the implementation of programs of study and courses, and the attainment of the goals of basic learning; they have been authorized by the Minister. Teaching resources produced as service documents by Alberta Learning are authorized by definition.

Availability

Most authorized resources are available for purchase from the Learning Resources Distributing Centre (LRDC), 12360 – 142 Street, Edmonton, Alberta, Canada, T5L 4X9. Telephone 780–427–5775, Fax 780–422–9750, Internet <http://www.lrdc.edc.gov.ab.ca>.

Resources are listed in the Learning Resources Distributing Centre *Buyers Guide* and at the LRDC web site. Resources are also listed in the Authorized Resources Database at the Alberta Learning web site. See page 1.

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INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)

CONTENTS

Information and Communication Technology (K–12)[1]

[1] The ICT curriculum is not intended to stand alone, but rather to be infused within core courses and programs.

Schools offering francophone and French immersion programs must take into account that ICT outcomes are to be achieved in the French language. Thus, the acquisition of software and operating systems should be consistent with the language of learning. In the case of dual-track schools, decisions regarding software and operating systems should be made on the basis of the needs of both student clienteles.

INFORMATION AND COMMUNICATION TECHNOLOGY

A. RATIONALE AND PHILOSOPHY

The Information and Communication Technology (ICT) curriculum provides a broad perspective on the nature of technology, how to use and apply a variety of technologies, and the impact of ICT on self and society. Students in Kindergarten through Grade 12 will be encouraged to grapple with the complexities, as well as the advantages and disadvantages, of technologies in our lives and workplaces. **The ICT curriculum is not intended to stand alone, but rather to be infused within core courses and programs**.

Technology is best learned within the context of applications. Activities, projects and problems that replicate real-life situations are effective resources for learning technology. Students will learn:

- that, although technology is often complex, it is simply "a way of doing things"
- about the impact of technologies in their lives and workplaces
- how to determine which processes, tools and techniques to use, and when to use them
- how to use and apply a variety of information and communication technologies to problem solving, decision making, inquiring and researching in the context of other subject matter.

Technology will serve today's students well—in entry-level work and beyond, in further study and lifelong learning, and in their personal lives as inquisitive, reflective, discerning and caring citizens. Advanced technologies are more pervasive today than they have ever been, and their uses are expanding continually. ICT is significantly enhancing and altering human activity, and enabling us to live, work and think in ways that most of us never thought possible.

Since technology has an increasingly significant impact, and such broad implications for everyone—individuals, groups and entire nations—students must be prepared to understand, use and apply ICT in effective, efficient and ethical ways.

A Way of Doing Things

Technology is about the ways things are done; the processes, tools and techniques that alter human activity. ICT is about the new ways in which we can communicate, inquire, make decisions and solve problems. It is the processes, tools and techniques for:

- gathering and identifying information
- classifying and organizing
- summarizing and synthesizing
- analyzing and evaluating
- speculating and predicting.

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The ICT curriculum presents these concepts within three interrelated categories:

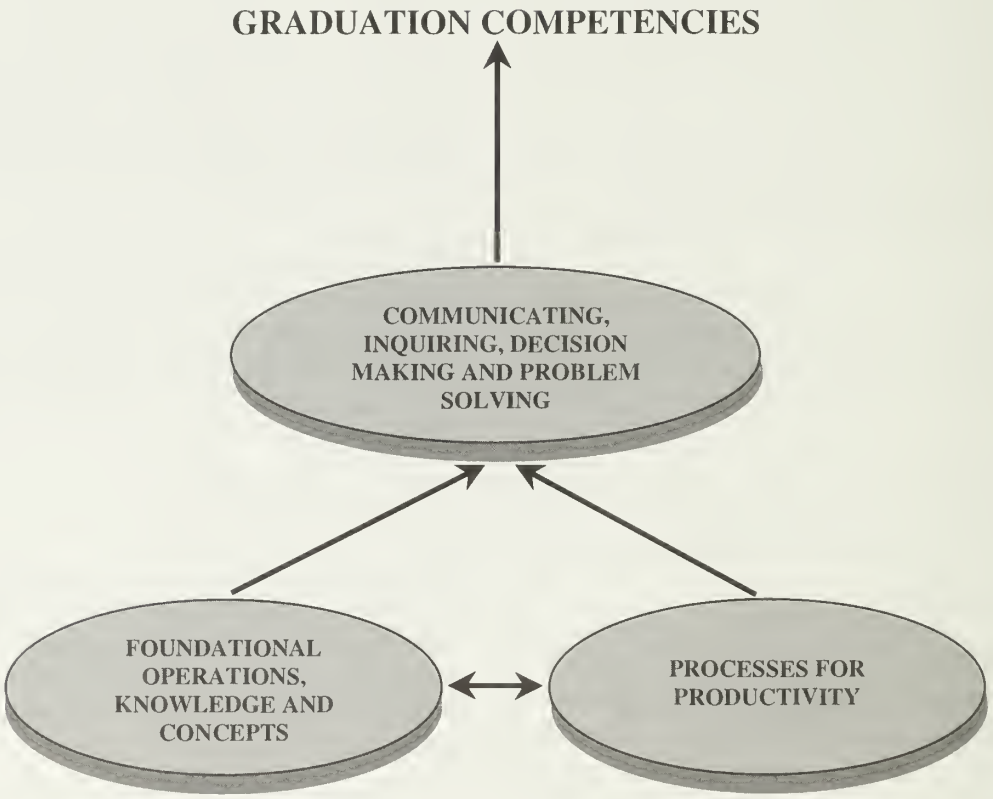
- communicating, inquiring, decision making and problem solving
- foundational operations, knowledge and concepts
- processes for productivity.

Communicating, inquiring, decision making and problem solving are about the ability to use a variety of processes to critically assess information, manage inquiry, solve problems, do research and communicate with a variety of audiences. Students are expected to apply their knowledge and skills in real-life situations.

Foundational operations, knowledge and concepts is about understanding the nature and affect of technology, the moral and ethical use of technology, mass media in a digitized context, ergonomic and safety issues, and basic computer, telecommunication and multimedia technology operations.

Processes for productivity is about the knowledge and skills required to use a variety of basic productivity tools and techniques—for example, text composition; data organization; graphical, audio and multimedia composition and manipulation; media and process integration; and electronic communication, navigation and collaboration through electronic means.

Expected ICT graduation competencies are illustrated in the diagram below.


GRADUATION COMPETENCIES
COMMUNICATING, INQUIRING, DECISION MAKING AND PROBLEM SOLVING
FOUNDATIONAL OPERATIONS, KNOWLEDGE AND CONCEPTS
PROCESSES FOR PRODUCTIVITY

Information and Communication Technology Outcomes

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ICT CURRICULUM

The contents of the ICT curriculum include:

- general outcomes
- specific outcomes
- illustrative examples
- assessment framework.

There is a progressive sequence of skill development throughout the grades.

General Outcomes

General outcomes are statements that identify what students are expected to know, be able to do and value upon completion of an exit level.

Specific Outcomes

Specific outcomes are statements identifying the component knowledge, skills and attitudes of a general outcome.

Illustrative Examples

Illustrative examples are provided in support documents and arranged by grade and subject. They are sample tasks that demonstrate and elaborate on the general and specific outcomes. They are important in further clarifying the intent of the outcomes and in conveying their richness, breadth and depth. There are suggestions for their placement in certain grade levels and/or subject areas, but they can be developed in any sequence that best meets student needs. **The illustrative examples are for discretionary use.**

Assessment Framework

The *Classroom Assessment Tool Kit* provides a support framework for determining student competencies in the ICT outcomes within core subjects and courses. Sample assessment tasks are provided in the subject areas of language arts, mathematics, science and social studies for Grade 3, Grade 6, Grade 9 and 20- and 23-level courses. These can be found at the Alberta Learning web site.

CURRICULUM OUTCOMES FORMAT

The format of the ICT curriculum has been structured in two ways. The outcomes, by category, are displayed once across all four divisions, and then stated once again, within each division.

FRENCH IMMERSION AND FRANCOPHONE PROGRAMS

Schools offering francophone and French immersion programs must take into account that ICT outcomes are to be achieved in the French language. Thus, the acquisition of software and operating systems should be consistent with the language of learning. In the case of dual-track schools, decisions regarding software and operating systems should be made on the basis of the needs of both student clienteles.

SOFTWARE TOOLS

Appropriate computer-based software tools are:

- word processing
- database
- spreadsheet
- draw/paint/graphics applications
- Internet browser
- email
- multimedia applications
- clipart/media clips.

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OUTCOME ORGANIZATION

OUTCOME CATEGORIES

Communicating, Inquiring, Decision Making and Problem Solving	
C1	Students will access, use and communicate information from a variety of technologies.
C2	Students will seek alternative viewpoints, using information technologies.
C3	Students will critically assess information accessed through the use of a variety of technologies.
C4	Students will use organizational processes and tools to manage inquiry.
C5	Students will use technology to aid collaboration during inquiry.
C6	Students will use technology to investigate and/or solve problems.
C7	Students will use electronic research techniques to construct personal knowledge and meaning.

Foundational Operations, Knowledge and Concepts	
F1	Students will demonstrate an understanding of the nature of technology.
F2	Students will understand the role of technology as it applies to self, work and society.
F3	Students will demonstrate a moral and ethical approach to the use of technology.
F4	Students will become discerning consumers of mass media and electronic information.
F5	Students will practise the concepts of ergonomics and safety when using technology.
F6	Students will demonstrate a basic understanding of the operating skills required in a variety of technologies.

Processes for Productivity	
P1	Students will compose, revise and edit text.
P2	Students will organize and manipulate data.
P3	Students will communicate through multimedia.
P4	Students will integrate various applications.
P5	Students will navigate and create hyperlinked resources.
P5	Students will use communication technology to interact with others.

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B. GENERAL AND SPECIFIC OUTCOMES

Category: Communicating, Inquiring, Decision Making and Problem Solving

General Outcomes	Specific Outcomes
C1 Students will access, use and communicate information from a variety of technologies.	**DIVISION 1** C1 1.1 access and retrieve appropriate information from electronic sources for a specific inquiry 1.2 process information from more than one source to retell what has been discovered **DIVISION 2** C1 2.1 access and retrieve appropriate information from the Internet by using a specific search path or from given uniform resource locations (URLs) 2.2 organize information gathered from the Internet, or an electronic source, by selecting and recording the data in logical files or categories; and by communicating effectively, through appropriate forms, such as speeches, reports and multimedia presentations, applying information technologies that serve particular audiences and purposes **DIVISION 3** C1 3.1 plan and conduct a search, using a wide variety of electronic sources 3.2 refine searches to limit sources to a manageable number 3.3 access and operate multimedia applications and technologies from stand-alone and online sources 3.4 access and retrieve information through the electronic network 3.5 analyze and synthesize information to create a product 3.6 communicate in a persuasive and engaging manner, through appropriate forms, such as speeches, letters, reports and multimedia presentations, applying information technologies for content, audience and purpose **DIVISION 4** C1 4.1 plan and perform complex searches, using more than one electronic source 4.2 select information from appropriate sources, including primary and secondary sources 4.3 evaluate and explain the advantages and disadvantages of various search strategies 4.4 communicate in a persuasive and engaging manner, through appropriate forms, such as speeches, letters, reports and multimedia presentations, applying information technologies for context, audience and purpose that extend and communicate understanding of complex issues

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Category: Communicating, Inquiring, Decision Making and Problem Solving

General Outcomes	Specific Outcomes
C2 **Students will seek alternative viewpoints, using information technologies.**	**DIVISION 1** C2 1.1 [no outcomes for this division] **DIVISION 2** C2 2.1 seek responses to inquiries from various authorities through electronic media **DIVISION 3** C2 3.1 access diverse viewpoints on particular topics by using appropriate technologies 3.2 assemble and organize different viewpoints in order to assess their validity 3.3 use information technology to find facts that support or refute diverse viewpoints **DIVISION 4** C2 4.1 consult a wide variety of sources that reflect varied viewpoints on particular topics 4.2 evaluate the validity of gathered viewpoints against other sources
C3 **Students will critically assess information accessed through the use of a variety of technologies.**	**DIVISION 1** C3 1.1 compare and contrast information from similar types of electronic sources **DIVISION 2** C3 2.1 identify and distinguish points of view expressed in electronic sources on a particular topic 2.2 recognize that information serves different purposes and that data from electronic sources may need to be verified to determine accuracy or relevance for the purpose used **DIVISION 3** C3 3.1 evaluate the authority and reliability of electronic sources 3.2 evaluate the relevance of electronically accessed information to a particular topic **DIVISION 4** C3 4.1 assess the authority, reliability and validity of electronically accessed information 4.2 demonstrate discriminatory selection of electronically accessed information that is relevant to a particular topic

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Category: Communicating, Inquiring, Decision Making and Problem Solving

General Outcomes	Specific Outcomes
C4 **Students will use organizational processes and tools to manage inquiry.**	**DIVISION 1** C4 1.1 follow a plan to complete an inquiry 1.2 formulate new questions as research progresses 1.3 organize information from more than one source **DIVISION 2** C4 2.1 design and follow a plan, including a schedule, to be used during an inquiry process, and make revisions to the plan, as necessary 2.2 organize information, using such tools as a database, spreadsheet or electronic webbing 2.3 reflect on and describe the processes involved in completing a project **DIVISION 3** C4 3.1 create a plan for an inquiry that includes consideration of time management 3.2 develop a process to manage volumes of information that can be made available through electronic sources 3.3 demonstrate the advanced search skills necessary to limit the number of hits desired for online and offline databases; for example, the use of "and" or "or" between search topics and the choice of appropriate search engines for the topic **DIVISION 4** C4 4.1 use calendars, time management or project management software to assist in conducting an inquiry

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Category: Communicating, Inquiring, Decision Making and Problem Solving

General Outcomes	Specific Outcomes
C5 **Students will use technology to aid collaboration during inquiry.**	**DIVISION 1** C5 1.1 share information collected from electronic sources to add to a group task **DIVISION 2** C5 2.1 retrieve data from available storage devices, such as a shared folder, to which a group has contributed 2.2 record group brainstorming, planning and sharing of ideas by using technology 2.3 extend the scope of a project beyond classroom collaboration by using communication technologies, such as the telephone and email **DIVISION 3** C5 3.1 access, retrieve and share information from electronic sources, such as common files 3.2 use networks to brainstorm, plan and share ideas with group members **DIVISION 4** C5 4.1 use telecommunications to pose critical questions to experts 4.2 participate in a variety of electronic group formats

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Category: Communicating, Inquiring, Decision Making and Problem Solving

General Outcomes	Specific Outcomes
C6 **Students will use technology to investigate and/or solve problems.**	**DIVISION 1** C6 1.1 identify a problem within a defined context 1.2 use technology to organize and display data in a problem-solving context 1.3 use technology to support and present conclusions **DIVISION 2** C6 2.1 select and use technology to assist in problem solving 2.2 use data gathered from a variety of electronic sources to address identified problems 2.3 use graphic organizers, such as mind mapping/webbing, flow charting and outlining, to present connections between ideas and information in a problem-solving environment 2.4 solve problems, using numerical operations and such tools as calculators and spreadsheets 2.5 solve problems requiring the sorting, organizing, classifying and extending of data, using such tools as calculators, spreadsheets, databases or hypertext technology 2.6 solve issue-related problems, using such communication tools as a word processor or email to involve others in the process 2.7 generate alternative solutions to problems by using technology to facilitate the process **DIVISION 3** C6 3.1 articulate clearly a plan of action to use technology to solve a problem 3.2 identify the appropriate materials and tools to use in order to accomplish a plan of action 3.3 evaluate choices and the progress in problem solving, then redefine the plan of action as appropriate 3.4 pose and test solutions to problems by using computer applications, such as computer-assisted design or simulation/modelling software 3.5 create a simulation or a model by using technology that permits the making of inferences **DIVISION 4** C6 4.1 investigate and solve problems of prediction, calculation and inference 4.2 investigate and solve problems of organization and manipulation of information 4.3 manipulate data by using charting and graphing technologies in order to test inferences and probabilities 4.4 generate new understandings of problematic situations by using some form of technology to facilitate the process 4.5 evaluate the appropriateness of the technology used to investigate or solve a problem

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Category: Communicating, Inquiring, Decision Making and Problem Solving

General Outcomes	Specific Outcomes
C7 **Students will use electronic research techniques to construct personal knowledge and meaning.**	**DIVISION 1** C7 1.1 develop questions that reflect a personal information need 1.2 summarize data by picking key words from gathered information and by using jottings, point form or retelling 1.3 draw conclusions from organized information 1.4 make predictions based on organized information **DIVISION 2** C7 2.1 use a variety of technologies to organize and synthesize researched information 2.2 use selected presentation tools to demonstrate connections among various pieces of information **DIVISION 3** C7 3.1 identify patterns in organized information 3.2 make connections among related, organized data, and assemble various pieces into a unified message **DIVISION 4** C7 4.1 use appropriate strategies to locate information to meet personal needs 4.2 analyze and synthesize information to determine patterns and links among ideas 4.3 use appropriate presentation software to demonstrate personal understandings

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Category: Foundational Operations, Knowledge and Concepts

General Outcomes	Specific Outcomes
F1 **Students will demonstrate an understanding of the nature of technology.**	**DIVISION 1** F1 1.1 identify techniques and tools for communicating, storing, retrieving and selecting information 1.2 apply terminology appropriate to the technologies being used at this division level 1.3 demonstrate an understanding that the user manages and controls the outcomes of technology **DIVISION 2** F1 2.1 apply terminology appropriate to the technologies being used at this division level 2.2 identify and apply techniques and tools for communicating, storing, retrieving and selecting information 2.3 explain the advantages and limitations of using computers to store, organize, retrieve and select information 2.4 recognize the potential for human error when using technology **DIVISION 3** F1 3.1 demonstrate an understanding that information can be transmitted through a variety of media 3.2 explain the concept of software and hardware compatibility 3.3 apply terminology appropriate to the technology being used at this division level 3.4 demonstrate an understanding that digital technology follows a logical order of operations 3.5 explain the difference between digital and analog data on communication systems 3.6 explain how the need for global communication affects technology around the world 3.7 demonstrate the ability to troubleshoot technical problems 3.8 demonstrate an understanding that technology is a process, technique or tool used to alter human activity **DIVISION 4** F1 4.1 assess the strengths and weaknesses of computer simulations in relation to real-world problems 4.2 solve mathematical and scientific problems by selecting appropriate technology to perform calculations and experiments 4.3 apply terminology appropriate to technology in all forms of communication 4.4 demonstrate an understanding of the general concepts of computer programming and the algorithms that enable technological devices to perform operations and solve problems

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Category: Foundational Operations, Knowledge and Concepts

General Outcomes	Specific Outcomes
F2 **Students will understand the role of technology as it applies to self, work and society.**	**DIVISION 1** F2 1.1 identify technologies used in everyday life 1.2 describe particular technologies being used for specific purposes **DIVISION 2** F2 2.1 identify how technological developments influence one's life 2.2 identify the role technology plays in a variety of careers 2.3 examine the environmental issues related to the use of technology 2.4 assess the personal significance of having limitless access to information provided by communication networks, such as the Internet 2.5 describe, using examples, how communication and information networks, such as the telephone and the Internet, create a global community **DIVISION 3** F2 3.1 describe the impact of communication technologies on past, present and future workplaces, lifestyles and the environment 3.2 identify potential technology-related career paths 3.3 identify the cultural impact of global communication 3.4 evaluate the driving forces behind various technological inventions 3.5 make inferences regarding future trends in the development and impact of communication technologies 3.6 explain ways in which technology can assist in the monitoring of local and global environmental conditions 3.7 analyze and assess the impact on society of having limitless access to information 3.8 identify the manner in which telecommunications technology affects time and distance **DIVISION 4** F2 4.1 use technology outside formal classroom settings 4.2 analyze how technological innovations and creativity affect the economy 4.3 demonstrate an understanding of new and emerging communication systems 4.4 evaluate possible potential for emerging technologies 4.5 demonstrate conservation measures when using technology 4.6 demonstrate an understanding of the basic principles and issues of e-commerce, including such topics as security and privacy, marketing, and implications for governments, businesses and consumers alike 4.7 use current, reliable information sources from around the world 4.8 analyze and assess the impact of technology on the global community

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Category: Foundational Operations, Knowledge and Concepts

General Outcomes	Specific Outcomes
F3 **Students will demonstrate a moral and ethical approach to the use of technology.**	**DIVISION 1** F3 1.1 demonstrate courtesy and follow classroom procedures when making appropriate use of computer technologies 1.2 work collaboratively to share limited resources 1.3 demonstrate appropriate care of technology equipment 1.4 recognize and acknowledge the ownership of electronic material 1.5 use appropriate communication etiquette **DIVISION 2** F3 2.1 comply with the acceptable use policy of the school and school authority for Internet and networked services, including software licensing agreements 2.2 work collaboratively to share limited resources 2.3 use appropriate communication language and etiquette 2.4 document sources obtained electronically, such as web site addresses 2.5 respect the privacy and products of others 2.6 use electronic networks in an ethical manner 2.7 comply with copyright legislation **DIVISION 3** F3 3.1 use time and resources on the network wisely 3.2 explain the issues involved in balancing the right to access information with the right to personal privacy 3.3 understand the need for copyright legislation 3.4 cite sources when using copyright and/or public domain material 3.5 download and transmit only materials that comply with the established network use policies and practices 3.6 model and assume personal responsibility for ethical behaviour and attitudes and acceptable use of information technologies and sources in local and global contexts **DIVISION 4** F3 4.1 demonstrate an understanding of how changes in technology can benefit or harm society 4.2 record relevant data for acknowledging sources of information, and cite sources correctly 4.3 respect ownership and integrity of information

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Category: Foundational Operations, Knowledge and Concepts

General Outcomes	Specific Outcomes
F4 **Students will become discerning consumers of mass media and electronic information.**	**DIVISION 1** F4 1.1 compare similar types of information from two different electronic sources **DIVISION 2** F4 2.1 recognize that graphics, video and sound enhance communication 2.2 describe how the use of various texts and graphics can alter perception 2.3 discuss how technology can be used to create special effects and/or to manipulate intent through the use of images and sound **DIVISION 3** F4 3.1 identify aspects of style in a presentation 3.2 understand the nature of various media and how they are consciously used to influence an audience 3.3 identify specific techniques used by the media to elicit particular responses from an audience 3.4 recognize that the ability of technology to manipulate images and sound can alter the meaning of a communication **DIVISION 4** F4 4.1 discriminate between style and content in a presentation 4.2 evaluate the influence and results of digital manipulation on our perceptions 4.3 identify and analyze a variety of factors that affect the authenticity of information derived from mass media and electronic communication

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Category: Foundational Operations, Knowledge and Concepts

General Outcomes	Specific Outcomes
F5 **Students will practise the concepts of ergonomics and safety when using technology.**	**DIVISION 1** F5 1.1 demonstrate proper posture when using a computer 1.2 demonstrate safe behaviours when using technology **DIVISION 2** F5 2.1 demonstrate the application of ergonomics to promote personal health and well-being 2.2 identify and apply safety procedures required for the technology being used **DIVISION 3** F5 3.1 identify risks to health and safety that result from improper use of technology 3.2 identify and apply safety procedures required for the technology being used **DIVISION 4** F5 4.1 assess new physical environments with respect to ergonomics 4.2 identify safety regulations specific to the technology being used

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Category: Foundational Operations, Knowledge and Concepts

General Outcomes	Specific Outcomes
F6 **Students will demonstrate a basic understanding of the operating skills required in a variety of technologies.**	**DIVISION 1** F6 1.1 perform basic computer operations, which may vary by environment, including powering up, inserting disks, moving the cursor, clicking on an icon, using pull-down menus, executing programs, saving files, retrieving files, printing, ejecting disks and powering down 1.2 use proper keyboarding techniques for the home row, enter, space bar, tab, backspace, delete and insertion-point arrow keys 1.3 operate basic audio and video equipment, including inserting, playing, recording and ejecting media **DIVISION 2** F6 2.1 power up and power down various technologies and peripherals correctly 2.2 use and organize files and directories 2.3 use peripherals, including printers and scanners 2.4 use appropriate keyboarding techniques for the alphabetic and punctuation keys **DIVISION 3** F6 3.1 connect and use audio, video and digital equipment 3.2 perform routine data maintenance and management of personal files 3.3 demonstrate proficiency in uploading and downloading text, image, audio and video files 3.4 demonstrate the ability to control devices electronically 3.5 describe the steps involved in loading software 3.6 identify and apply safety procedures, including antivirus scans and virus checks, to maintain data integrity **DIVISION 4** F6 4.1 continue to demonstrate the outcomes addressed within the previous divisions. Students interested in pursuing advanced study in such areas as electronics, programming, computer-aided design and drafting (CADD), robotics and other industrial applications of technology will find opportunities in Career and Technology Studies (CTS) courses.

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Category: Processes for Productivity

General Outcomes	Specific Outcomes
P1 **Students will compose, revise and edit text.**	**DIVISION 1** P1 1.1 create original text, using word processing software, to communicate and demonstrate understanding of forms and techniques 1.2 edit complete sentences, using such features of word processing as cut, copy and paste **DIVISION 2** P1 2.1 create and revise original text to communicate and demonstrate understanding of forms and techniques 2.2 edit and format text to clarify and enhance meaning, using such word processing features as the thesaurus, find/change, text alignment, font size and font style 2.3 convert digital text files by opening and saving them as different file types **DIVISION 3** P1 3.1 design a document, using style sheets and with attention to page layout, that incorporates advanced word processing techniques, including headers, footers, margins, columns, table of contents, bibliography and index 3.2 use advanced word processing menu features to accomplish a task; for example, insert a table, graph or text from another document 3.3 revise text documents based on feedback from others 3.4 use appropriate communication technology to elicit feedback from others **DIVISION 4** P1 4.1 continue to demonstrate the outcomes achieved in prior grades and course subjects

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Category: Processes for Productivity

General Outcomes	Specific Outcomes
P2 **Students will organize and manipulate data.**	**DIVISION 1** P2 1.1 read information from a prepared database **DIVISION 2** P2 2.1 enter and manipulate data by using such tools as spreadsheets or databases for a specific purpose 2.2 display data electronically through graphs and charts **DIVISION 3** P2 3.1 design, create and modify a database for a specific purpose 3.2 design, create and modify a spreadsheet for a specific purpose, using functions such as SUM, PRODUCT, QUOTIENT and AVERAGE 3.3 use a variety of technological graphing tools to draw graphs for data involving one or two variables 3.4 use a scientific calculator or a computer to solve problems involving rational numbers **DIVISION 4** P2 4.1 manipulate and present data through the selection of appropriate tools, such as scientific instrumentation, calculators, databases and/or spreadsheets

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Category: Processes for Productivity

General Outcomes	Specific Outcomes
P3 Students will communicate through multimedia.	**DIVISION 1** P3 1.1 access images, such as clip art, to support communication 1.2 create visual images by using such tools as paint and draw programs for particular audiences and purposes 1.3 access sound clips or recorded voice to support communication **DIVISION 2** P3 2.1 create a multimedia presentation, incorporating such features as visual images (clip art, video clips), sounds (live recordings, sound clips) and animated images, appropriate to a variety of audiences and purposes 2.2 access available databases for images to support communication **DIVISION 3** P3 3.1 create multimedia presentations that take into account audiences of diverse size, age, gender, ethnicity and geographic location 3.2 create multimedia presentations that incorporate meaningful graphics, audio, video and text gathered from remote sources **DIVISION 4** P3 4.1 select and use, independently, multimedia capabilities for presentations in various subject areas 4.2 support communication with appropriate images, sounds and music 4.3 apply general principles of graphic layout and design to a document in process

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Category: Processes for Productivity

General Outcomes	Specific Outcomes
P4 **Students will integrate various applications.**	**DIVISION 1** P4 1.1 integrate text and graphics to form a meaningful message 1.2 balance text and graphics for visual effect **DIVISION 2** P4 2.1 integrate a spreadsheet, or graphs generated by a spreadsheet, into a text document 2.2 vary font size and font style, and placement of text and graphics, in order to create a certain visual effect **DIVISION 3** P4 3.1 integrate information from a database into a text document 3.2 integrate database reports into a text document 3.3 emphasize information, using placement and colour **DIVISION 4** P4 4.1 integrate a variety of visual and audio information into a document to create a message targeted for a specific audience 4.2 apply principles of graphic design to enhance meaning and audience appeal 4.3 use integrated software effectively and efficiently to reproduce work that incorporates data, graphics and text

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Category: Processes for Productivity

General Outcomes	Specific Outcomes
P5 **Students will navigate and create hyperlinked resources.**	**DIVISION 1** P5 1.1 navigate within a document, compact disc or other software program that contains links 1.2 access hyperlinked sites on an intranet or the Internet **DIVISION 2** P5 2.1 create and navigate a multiple-link document 2.2 navigate through a document that contains links to locate, copy and then paste data in a new file 2.3 navigate the Internet with appropriate software **DIVISION 3** P5 3.1 create a multiple-link web page 3.2 demonstrate proficient use of various information retrieval technologies **DIVISION 4** P5 4.1 create multiple-link documents appropriate to the content of a particular topic 4.2 post multiple-link pages on the World Wide Web or on a local or wide area network

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Category: Processes for Productivity

General Outcomes	Specific Outcomes
P6 **Students will use communication technology to interact with others.**	**DIVISION 1** P6 1.1 compose a message that can be sent through communication technology 1.2 communicate electronically with people outside the classroom **DIVISION 2** P6 2.1 select and use the technology appropriate to a given communication situation **DIVISION 3** P6 3.1 communicate with a targeted audience, within a controlled environment, by using such communication technologies as email and web browsers 3.2 demonstrate proficiency in accessing local area network, wide area network and Internet services, including uploading and downloading text, image, audio and video files **DIVISION 4** P6 4.1 select and use the appropriate technologies to communicate effectively with a targeted audience

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Category: Communicating, Inquiring, Decision Making and Problem Solving

General Outcomes	Specific Outcomes
C1 **Students will access, use and communicate information from a variety of technologies.**	C1 1.1 access and retrieve appropriate information from electronic sources for a specific inquiry 1.2 process information from more than one source to retell what has been discovered
C2 **Students will seek alternative viewpoints, using information technologies.**	C2 1.1 [no outcomes for this division]
C3 **Students will critically assess information accessed through the use of a variety of technologies.**	C3 1.1 compare and contrast information from similar types of electronic sources
C4 **Students will use organizational processes and tools to manage inquiry.**	C4 1.1 follow a plan to complete an inquiry 1.2 formulate new questions as research progresses 1.3 organize information from more than one source
C5 **Students will use technology to aid collaboration during inquiry.**	C5 1.1 share information collected from electronic sources to add to a group task
C6 **Students will use technology to investigate and/or solve problems.**	C6 1.1 identify a problem within a defined context 1.2 use technology to organize and display data in a problem-solving context 1.3 use technology to support and present conclusions
C7 **Students will use electronic research techniques to construct personal knowledge and meaning.**	C7 1.1 develop questions that reflect a personal information need 1.2 summarize data by picking key words from gathered information and by using jottings, point form or retelling 1.3 draw conclusions from organized information 1.4 make predictions based on organized information

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Category: Foundational Operations, Knowledge and Concepts

General Outcomes	Specific Outcomes
F1 **Students will demonstrate an understanding of the nature of technology.**	F1 1.1 identify techniques and tools for communicating, storing, retrieving and selecting information 1.2 apply terminology appropriate to the technologies being used at this division level 1.3 demonstrate an understanding that the user manages and controls the outcomes of technology
F2 **Students will understand the role of technology as it applies to self, work and society.**	F2 1.1 identify technologies used in everyday life 1.2 describe particular technologies being used for specific purposes
F3 **Students will demonstrate a moral and ethical approach to the use of technology.**	F3 1.1 demonstrate courtesy and follow classroom procedures when making appropriate use of computer technologies 1.2 work collaboratively to share limited resources 1.3 demonstrate appropriate care of technology equipment 1.4 recognize and acknowledge the ownership of electronic material 1.5 use appropriate communication etiquette
F4 **Students will become discerning consumers of mass media and electronic information.**	F4 1.1 compare similar types of information from two different electronic sources
F5 **Students will practise the concepts of ergonomics and safety when using technology.**	F5 1.1 demonstrate proper posture when using a computer 1.2 demonstrate safe behaviours when using technology
F6 **Students will demonstrate a basic understanding of the operating skills required in a variety of technologies.**	F6 1.1 perform basic computer operations, which may vary by environment, including powering up, inserting disks, moving the cursor, clicking on an icon, using pull-down menus, executing programs, saving files, retrieving files, printing, ejecting disks and powering down 1.2 use proper keyboarding techniques for the home row, enter, space bar, tab, backspace, delete and insertion-point arrow keys 1.3 operate basic audio and video equipment, including inserting, playing, recording and ejecting media

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Category: Processes for Productivity

General Outcomes	Specific Outcomes
P1 **Students will compose, revise and edit text.**	P1 1.1 create original text, using word processing software, to communicate and demonstrate understanding of forms and techniques 1.2 edit complete sentences, using such features of word processing as cut, copy and paste
P2 **Students will organize and manipulate data.**	P2 1.1 read information from a prepared database
P3 **Students will communicate through multimedia.**	P3 1.1 access images, such as clip art, to support communication 1.2 create visual images by using such tools as paint and draw programs for particular audiences and purposes 1.3 access sound clips or recorded voice to support communication
P4 **Students will integrate various applications.**	P4 1.1 integrate text and graphics to form a meaningful message 1.2 balance text and graphics for visual effect
P5 **Students will navigate and create hyperlinked resources.**	P5 1.1 navigate within a document, compact disc or other software program that contains links 1.2 access hyperlinked sites on an intranet or the Internet
P6 **Students will use communication technology to interact with others.**	P6 1.1 compose a message that can be sent through communication technology 1.2 communicate electronically with people outside the classroom

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Category: Communicating, Inquiring, Decision Making and Problem Solving

General Outcomes	Specific Outcomes
C1 **Students will access, use and communicate information from a variety of technologies.**	C1 2.1 access and retrieve appropriate information from the Internet by using a specific search path or from given uniform resource locations (URLs) 2.2 organize information gathered from the Internet, or an electronic source, by selecting and recording the data in logical files or categories; and by communicating effectively, through appropriate forms, such as speeches, reports and multimedia presentations, applying information technologies that serve particular audiences and purposes
C2 **Students will seek alternative viewpoints, using information technologies.**	C2 2.1 seek responses to inquiries from various authorities through electronic media
C3 **Students will critically assess information accessed through the use of a variety of technologies.**	C3 2.1 identify and distinguish points of view expressed in electronic sources on a particular topic 2.2 recognize that information serves different purposes and that data from electronic sources may need to be verified to determine accuracy or relevance for the purpose used
C4 **Students will use organizational processes and tools to manage inquiry.**	C4 2.1 design and follow a plan, including a schedule, to be used during an inquiry process, and make revisions to the plan, as necessary 2.2 organize information, using such tools as a database, spreadsheet or electronic webbing 2.3 reflect on and describe the processes involved in completing a project
C5 **Students will use technology to aid collaboration during inquiry.**	C5 2.1 retrieve data from available storage devices, such as a shared folder, to which a group has contributed 2.2 record group brainstorming, planning and sharing of ideas by using technology 2.3 extend the scope of a project beyond classroom collaboration by using communication technologies, such as the telephone and email

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Category: Communicating, Inquiring, Decision Making and Problem Solving

General Outcomes	Specific Outcomes
C6 **Students will use technology to investigate and/or solve problems.**	C6 2.1 select and use technology to assist in problem solving 2.2 use data gathered from a variety of electronic sources to address identified problems 2.3 use graphic organizers, such as mind mapping/webbing, flow charting and outlining, to present connections between ideas and information in a problem-solving environment 2.4 solve problems, using numerical operations and such tools as calculators and spreadsheets 2.5 solve problems requiring the sorting, organizing, classifying and extending of data, using such tools as calculators, spreadsheets, databases or hypertext technology 2.6 solve issue-related problems, using such communication tools as a word processor or email to involve others in the process 2.7 generate alternative solutions to problems by using technology to facilitate the process
C7 **Students will use electronic research techniques to construct personal knowledge and meaning.**	C7 2.1 use a variety of technologies to organize and synthesize researched information 2.2 use selected presentation tools to demonstrate connections among various pieces of information

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Category: Foundational Operations, Knowledge and Concepts

General Outcomes	Specific Outcomes
F1 **Students will demonstrate an understanding of the nature of technology.**	F1 2.1 apply terminology appropriate to the technologies being used at this division level 2.2 identify and apply techniques and tools for communicating, storing, retrieving and selecting information 2.3 explain the advantages and limitations of using computers to store, organize, retrieve and select information 2.4 recognize the potential for human error when using technology
F2 **Students will understand the role of technology as it applies to self, work and society.**	F2 2.1 identify how technological developments influence one's life 2.2 identify the role technology plays in a variety of careers 2.3 examine the environmental issues related to the use of technology 2.4 assess the personal significance of having limitless access to information provided by communication networks, such as the Internet 2.5 describe, using examples, how communication and information networks, such as the telephone and the Internet, create a global community
F3 **Students will demonstrate a moral and ethical approach to the use of technology.**	F3 2.1 comply with the acceptable use policy of the school and school authority for Internet and networked services, including software licensing agreements 2.2 work collaboratively to share limited resources 2.3 use appropriate communication language and etiquette 2.4 document sources obtained electronically, such as web site addresses 2.5 respect the privacy and products of others 2.6 use electronic networks in an ethical manner 2.7 comply with copyright legislation

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Category: Foundational Operations, Knowledge and Concepts

General Outcomes	Specific Outcomes
F4 **Students will become discerning consumers of mass media and electronic information.**	F4 2.1 recognize that graphics, video and sound enhance communication 2.2 describe how the use of various texts and graphics can alter perception 2.3 discuss how technology can be used to create special effects and/or to manipulate intent through the use of images and sound
F5 **Students will practise the concepts of ergonomics and safety when using technology.**	F5 2.1 demonstrate the application of ergonomics to promote personal health and well-being 2.2 identify and apply safety procedures required for the technology being used
F6 **Students will demonstrate a basic understanding of the operating skills required in a variety of technologies.**	F6 2.1 power up and power down various technologies and peripherals correctly 2.2 use and organize files and directories 2.3 use peripherals, including printers and scanners 2.4 use appropriate keyboarding techniques for the alphabetic and punctuation keys

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Category: Processes for Productivity

General Outcomes	Specific Outcomes
P1 **Students will compose, revise and edit text.**	P1 2.1 create and revise original text to communicate and demonstrate understanding of forms and techniques 2.2 edit and format text to clarify and enhance meaning, using such word processing features as the thesaurus, find/change, text alignment, font size and font style 2.3 convert digital text files by opening and saving them as different file types
P2 **Students will organize and manipulate data.**	P2 2.1 enter and manipulate data by using such tools as spreadsheets or databases for a specific purpose 2.2 display data electronically through graphs and charts
P3 **Students will communicate through multimedia.**	P3 2.1 create a multimedia presentation, incorporating such features as visual images (clip art, video clips), sounds (live recordings, sound clips) and animated images, appropriate to a variety of audiences and purposes 2.2 access available databases for images to support communication
P4 **Students will integrate various applications.**	P4 2.1 integrate a spreadsheet, or graphs generated by a spreadsheet, into a text document 2.2 vary font size and font style, and placement of text and graphics, in order to create a certain visual effect
P5 **Students will navigate and create hyperlinked resources.**	P5 2.1 create and navigate a multiple-link document 2.2 navigate through a document that contains links to locate, copy and then paste data in a new file 2.3 navigate the Internet with appropriate software
P6 **Students will use communication technology to interact with others.**	P6 2.1 select and use the technology appropriate to a given communication situation

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Category: Communicating, Inquiring, Decision Making and Problem Solving

General Outcomes	Specific Outcomes
C1 **Students will access, use and communicate information from a variety of technologies.**	C1 3.1 plan and conduct a search, using a wide variety of electronic sources 3.2 refine searches to limit sources to a manageable number 3.3 access and operate multimedia applications and technologies from stand-alone and online sources 3.4 access and retrieve information through the electronic network 3.5 analyze and synthesize information to create a product 3.6 communicate in a persuasive and engaging manner, through appropriate forms, such as speeches, letters, reports and multimedia presentations, applying information technologies for content, audience and purpose
C2 **Students will seek alternative viewpoints, using information technologies.**	C2 3.1 access diverse viewpoints on particular topics by using appropriate technologies 3.2 assemble and organize different viewpoints in order to assess their validity 3.3 use information technology to find facts that support or refute diverse viewpoints
C3 **Students will critically assess information accessed through the use of a variety of technologies.**	C3 3.1 evaluate the authority and reliability of electronic sources 3.2 evaluate the relevance of electronically accessed information to a particular topic
C4 **Students will use organizational processes and tools to manage inquiry.**	C4 3.1 create a plan for an inquiry that includes consideration of time management 3.2 develop a process to manage volumes of information that can be made available through electronic sources 3.3 demonstrate the advanced search skills necessary to limit the number of hits desired for online and offline databases; for example, the use of "and" or "or" between search topics and the choice of appropriate search engines for the topic

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Category: Communicating, Inquiring, Decision Making and Problem Solving

General Outcomes	Specific Outcomes
C5 **Students will use technology to aid collaboration during inquiry.**	C5 3.1 access, retrieve and share information from electronic sources, such as common files 3.2 use networks to brainstorm, plan and share ideas with group members
C6 **Students will use technology to investigate and/or solve problems.**	C6 3.1 articulate clearly a plan of action to use technology to solve a problem 3.2 identify the appropriate materials and tools to use in order to accomplish a plan of action 3.3 evaluate choices and the progress in problem solving, then redefine the plan of action as appropriate 3.4 pose and test solutions to problems by using computer applications, such as computer-assisted design or simulation/modelling software 3.5 create a simulation or a model by using technology that permits the making of inferences
C7 **Students will use electronic research techniques to construct personal knowledge and meaning.**	C7 3.1 identify patterns in organized information 3.2 make connections among related, organized data, and assemble various pieces into a unified message

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Category: Foundational Operations, Knowledge and Concepts

General Outcomes	Specific Outcomes
F1 **Students will demonstrate an understanding of the nature of technology.**	F1 3.1 demonstrate an understanding that information can be transmitted through a variety of media 3.2 explain the concept of software and hardware compatibility 3.3 apply terminology appropriate to the technology being used at this division level 3.4 demonstrate an understanding that digital technology follows a logical order of operations 3.5 explain the difference between digital and analog data on communication systems 3.6 explain how the need for global communication affects technology around the world 3.7 demonstrate the ability to troubleshoot technical problems 3.8 demonstrate an understanding that technology is a process, technique or tool used to alter human activity
F2 **Students will understand the role of technology as it applies to self, work and society.**	F2 3.1 describe the impact of communication technologies on past, present and future workplaces, lifestyles and the environment 3.2 identify potential technology-related career paths 3.3 identify the cultural impact of global communication 3.4 evaluate the driving forces behind various technological inventions 3.5 make inferences regarding future trends in the development and impact of communication technologies 3.6 explain ways in which technology can assist in the monitoring of local and global environmental conditions 3.7 analyze and assess the impact on society of having limitless access to information 3.8 identify the manner in which telecommunications technology affects time and distance

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Category: Foundational Operations, Knowledge and Concepts

General Outcomes	Specific Outcomes
F3 **Students will demonstrate a moral and ethical approach to the use of technology.**	F3 3.1 use time and resources on the network wisely 3.2 explain the issues involved in balancing the right to access information with the right to personal privacy 3.3 understand the need for copyright legislation 3.4 cite sources when using copyright and/or public domain material 3.5 download and transmit only materials that comply with the established network use policies and practices 3.6 model and assume personal responsibility for ethical behaviour and attitudes and acceptable use of information technologies and sources in local and global contexts
F4 **Students will become discerning consumers of mass media and electronic information.**	F4 3.1 identify aspects of style in a presentation 3.2 understand the nature of various media and how they are consciously used to influence an audience 3.3 identify specific techniques used by the media to elicit particular responses from an audience 3.4 recognize that the ability of technology to manipulate images and sound can alter the meaning of a communication
F5 **Students will practise the concepts of ergonomics and safety when using technology.**	F5 3.1 identify risks to health and safety that result from improper use of technology 3.2 identify and apply safety procedures required for the technology being used
F6 **Students will demonstrate a basic understanding of the operating skills required in a variety of technologies.**	F6 3.1 connect and use audio, video and digital equipment 3.2 perform routine data maintenance and management of personal files 3.3 demonstrate proficiency in uploading and downloading text, image, audio and video files 3.4 demonstrate the ability to control devices electronically 3.5 describe the steps involved in loading software 3.6 identify and apply safety procedures, including antivirus scans and virus checks, to maintain data integrity

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Category: Processes for Productivity

General Outcomes	Specific Outcomes
P1 **Students will compose, revise and edit text.**	P1 3.1 design a document, using style sheets and with attention to page layout, that incorporates advanced word processing techniques, including headers, footers, margins, columns, table of contents, bibliography and index 3.2 use advanced word processing menu features to accomplish a task; for example, insert a table, graph or text from another document 3.3 revise text documents based on feedback from others 3.4 use appropriate communication technology to elicit feedback from others
P2 **Students will organize and manipulate data.**	P2 3.1 design, create and modify a database for a specific purpose 3.2 design, create and modify a spreadsheet for a specific purpose, using functions such as SUM, PRODUCT, QUOTIENT and AVERAGE 3.3 use a variety of technological graphing tools to draw graphs for data involving one or two variables 3.4 use a scientific calculator or a computer to solve problems involving rational numbers
P3 **Students will communicate through multimedia.**	P3 3.1 create multimedia presentations that take into account audiences of diverse size, age, gender, ethnicity and geographic location 3.2 create multimedia presentations that incorporate meaningful graphics, audio, video and text gathered from remote sources
P4 **Students will integrate various applications.**	P4 3.1 integrate information from a database into a text document 3.2 integrate database reports into a text document 3.3 emphasize information, using placement and colour
P5 **Students will navigate and create hyperlinked resources.**	P5 3.1 create a multiple-link web page 3.2 demonstrate proficient use of various information retrieval technologies
P6 **Students will use communication technology to interact with others.**	P6 3.1 communicate with a targeted audience, within a controlled environment, by using such communication technologies as email and web browsers 3.2 demonstrate proficiency in accessing local area network, wide area network and Internet services, including uploading and downloading text, image, audio and video files

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Category: Communicating, Inquiring, Decision Making and Problem Solving

General Outcomes	Specific Outcomes
C1 **Students will access, use and communicate information from a variety of technologies.**	C1 4.1 plan and perform complex searches, using more than one electronic source 4.2 select information from appropriate sources, including primary and secondary sources 4.3 evaluate and explain the advantages and disadvantages of various search strategies 4.4 communicate in a persuasive and engaging manner, through appropriate forms, such as speeches, letters, reports and multimedia presentations, applying information technologies for context, audience and purpose that extend and communicate understanding of complex issues
C2 **Students will seek alternative viewpoints, using information technologies.**	C2 4.1 consult a wide variety of sources that reflect varied viewpoints on particular topics 4.2 evaluate the validity of gathered viewpoints against other sources
C3 **Students will critically assess information accessed through the use of a variety of technologies.**	C3 4.1 assess the authority, reliability and validity of electronically accessed information 4.2 demonstrate discriminatory selection of electronically accessed information that is relevant to a particular topic
C4 **Students will use organizational processes and tools to manage inquiry.**	C4 4.1 use calendars, time management or project management software to assist in conducting an inquiry
C5 **Students will use technology to aid collaboration during inquiry.**	C5 4.1 use telecommunications to pose critical questions to experts 4.2 participate in a variety of electronic group formats
C6 **Students will use technology to investigate and/or solve problems.**	C6 4.1 investigate and solve problems of prediction, calculation and inference 4.2 investigate and solve problems of organization and manipulation of information 4.3 manipulate data by using charting and graphing technologies in order to test inferences and probabilities 4.4 generate new understandings of problematic situations by using some form of technology to facilitate the process 4.5 evaluate the appropriateness of the technology used to investigate or solve a problem
C7 **Students will use electronic research techniques to construct personal knowledge and meaning.**	C7 4.1 use appropriate strategies to locate information to meet personal needs 4.2 analyze and synthesize information to determine patterns and links among ideas 4.3 use appropriate presentation software to demonstrate personal understandings

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Category: Foundational Operations, Knowledge and Concepts

General Outcomes	Specific Outcomes
F1 **Students will demonstrate an understanding of the nature of technology.**	F1 4.1 assess the strengths and weaknesses of computer simulations in relation to real-world problems 4.2 solve mathematical and scientific problems by selecting appropriate technology to perform calculations and experiments 4.3 apply terminology appropriate to technology in all forms of communication 4.4 demonstrate an understanding of the general concepts of computer programming and the algorithms that enable technological devices to perform operations and solve problems
F2 **Students will understand the role of technology as it applies to self, work and society.**	F2 4.1 use technology outside formal classroom settings 4.2 analyze how technological innovations and creativity affect the economy 4.3 demonstrate an understanding of new and emerging communication systems 4.4 evaluate possible potential for emerging technologies 4.5 demonstrate conservation measures when using technology 4.6 demonstrate an understanding of the basic principles and issues of e-commerce, including such topics as security and privacy, marketing, and implications for governments, businesses and consumers alike 4.7 use current, reliable information sources from around the world 4.8 analyze and assess the impact of technology on the global community
F3 **Students will demonstrate a moral and ethical approach to the use of technology.**	F3 4.1 demonstrate an understanding of how changes in technology can benefit or harm society 4.2 record relevant data for acknowledging sources of information, and cite sources correctly 4.3 respect ownership and integrity of information
F4 **Students will become discerning consumers of mass media and electronic information.**	F4 4.1 discriminate between style and content in a presentation 4.2 evaluate the influence and results of digital manipulation on our perceptions 4.3 identify and analyze a variety of factors that affect the authenticity of information derived from mass media and electronic communication

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Category: Foundational Operations, Knowledge and Concepts

General Outcomes	Specific Outcomes
F5 **Students will practise the concepts of ergonomics and safety when using technology.**	F5 4.1 assess new physical environments with respect to ergonomics 4.2 identify safety regulations specific to the technology being used
F6 **Students will demonstrate a basic understanding of the operating skills required in a variety of technologies.**	F6 4.1 continue to demonstrate the outcomes addressed within the previous divisions. Students interested in pursuing advanced study in such areas as electronics, programming, computer-aided design and drafting (CADD), robotics and other industrial applications of technology will find opportunities in Career and Technology Studies (CTS) courses

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Category: Processes for Productivity

General Outcomes	Specific Outcomes
P1 **Students will compose, revise and edit text.**	P1 4.1 continue to demonstrate the outcomes achieved in prior grades and course subjects
P2 **Students will organize and manipulate data.**	P2 4.1 manipulate and present data through the selection of appropriate tools, such as scientific instrumentation, calculators, databases and/or spreadsheets
P3 **Students will communicate through multimedia.**	P3 4.1 select and use, independently, multimedia capabilities for presentations in various subject areas 4.2 support communication with appropriate images, sounds and music 4.3 apply general principles of graphic layout and design to a document in process
P4 **Students will integrate various applications.**	P4 4.1 integrate a variety of visual and audio information into a document to create a message targeted for a specific audience 4.2 apply principles of graphic design to enhance meaning and audience appeal 4.3 use integrated software effectively and efficiently to reproduce work that incorporates data, graphics and text
P5 **Students will navigate and create hyperlinked resources.**	P5 4.1 create multiple-link documents appropriate to the content of a particular topic 4.2 post multiple-link pages on the World Wide Web or on a local or wide area network
P6 **Students will use communication technology to interact with others.**	P6 4.1 select and use the appropriate technologies to communicate effectively with a targeted audience

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FRANÇAIS 10–20–30

The course, Français 10–20–30, has been developed to meet the specific linguistic needs of senior high students registered in a francophone program or school.

This course has a double focus: the development of a functional use of the French language in personal, social and academic settings; as well as the development and enhancement of one's identity and pride as a Francophone living in Alberta. As in any language program, language skill development—listening/viewing, speaking, reading and writing—at every grade level to enhance progressively the students' ability to communicate effectively in the French language. The study of grammar and vocabulary acquisition are pursued to ensure clear and appropriate communication. A great deal of emphasis is placed on the planning, monitoring and evaluation strategies that students need to use to complete successfully a communication project. The study of French literature—novels, plays, poetry, short stories—allows the students to gain understanding, pride and appreciation for their culture and traditions.

A Grade 12 diploma examination is developed for Français 30.

Specific curricular information and a listing of basic learning resources for each course are contained in the following document prepared by French Language Services of Alberta Learning: *Français 10–20–30, Programme d'études.*

FRENCH LANGUAGE ARTS 10–20–30

This French language arts course has been developed to meet the specific linguistic needs of senior high students registered in a French immersion program.

This course is focused on the development of a functional use of the French language in both social and academic settings. As in any language program, language skill development—listening/viewing, speaking, reading and writing—are developed at every grade level to enhance progressively the students' ability to communicate effectively in the French language. Grammar and vocabulary acquisition are studied within the context of ensuring clear and appropriate communication. A great deal of emphasis is placed on the planning, monitoring and evaluation strategies that students need to use to complete successfully a communication project. The study of French literature—novels, plays, poetry, short stories—allows the students to gain an understanding of the culture and traditions of French speaking people.

There is no Grade 12 diploma examination developed for French Language Arts 30.

Specific curricular information and basic learning resources for each course are contained in the following document prepared by French Language Services of Alberta Learning: *French Language Arts 10–20–30, Programme d'études.*

MATHEMATICS

CONTENTS

Mathematics Applied and Pure Programs

Mathematics 31

Mathematics 23–33

★Mathematics 14–24

★ The **revised** Mathematics 14–24 program of studies has interim approval effective September 1, 1999.

The **new** Mathematics Preparation 10 program of studies has interim approval effective July 1, 1999.

MATHEMATICS 23–33

A. PROGRAM RATIONALE AND PHILOSOPHY

To set goals and make informed choices, students need an array of thinking and problem-solving skills. Fundamental to this is an understanding of mathematical techniques and processes that will enable them to apply the basic skills necessary to address everyday mathematical situations, as well as acquire higher order skills in logical analysis and methods for making valid inferences.

A knowledge of mathematics is essential for a well-educated citizenry. However, the need for and use of mathematics in the life of the average citizen is changing. **Emphasis has shifted from the memorization of mathematical formulas and algorithms toward a more dynamic view of mathematics as a precise language, used to reason, interpret and explore.** There is still a need for the logical development of concepts and skills as a basis for the appropriate use of mathematical information to solve problems. The more traditional problem-solving techniques, combined with techniques such as estimation and simulation, and incorporated with modern technology, are the tools with which mathematical problems are solved.

Change in the way in which mathematics is used is necessitating a concurrent change in the emphases of mathematics education. Students need an expanded list of fundamental concepts but will also need to understand the ideas that make up those concepts and how they are related. They also require familiarity with their applications. Most important, students must be able to solve problems using the mathematical processes developed, and be confident in their ability to apply known mathematical skills and concepts in the acquisition of new mathematical knowledge. In addition, the ability of technology to provide quick and accurate computation and manipulation, to enhance conceptual understanding and to facilitate higher order thinking, should be recognized and used by students.

The majority of students who enter senior high school exhibit mainly concrete operational behaviours with regard to mathematics. Students are expected to acquire much abstract understanding in senior high school mathematics courses. The course content of the Senior High School Mathematics Program is cognitively appropriate for the students and should be presented in a way that is consistent with the students' ability to understand.

The Senior High School Mathematics Program includes the course sequences Mathematics 16–26, 14–24, 23–33, plus Mathematics 31. Transfer by students among courses of different sequences is possible. The course sequences commensurate with differing abilities, interests and aspirations, are designed to enable students to have success in mathematics. As well, the mathematics program reflects the changing needs

of society, and provides students with the mathematical concepts, skills and attitudes necessary to cope with the challenges of the future.

The Mathematics 23–33 sequence is the mainstream mathematics program designed for students who require mathematics to prepare them for many post-secondary programs at universities, colleges, trades and employment. This sequence emphasizes an inductive development of topics in algebra, geometry, trigonometry, statistics and consumer mathematics. Mathematics 23–33 satisfies the requirements for the Alberta High School Diploma.

B. GENERAL LEARNER EXPECTATIONS

Students are expected to be mathematically literate at the conclusion of their senior high school mathematics education. **Mathematical literacy** refers to students' ability and inclination to manage the demands of their world through the use of mathematical concepts and procedures to communicate, reason and solve problems. More specifically, *students will be expected to:*

- have achieved understanding of the basic mathematical concepts, and developed the skills and attitudes needed to become responsible and contributing members of society
- apply basic mathematical skills and concepts in practical situations
- have developed the skills, concepts and attitudes that will ensure success in the mathematical situations that occur in future educational endeavours, employment and everyday life
- have developed the skills, concepts and attitudes that will enable the acquisition of mathematical knowledge beyond the conclusion of secondary education
- have developed critical and creative thinking skills
- be able to communicate mathematical ideas effectively
- understand how mathematics can be used to investigate, interpret and make decisions in human affairs
- understand how mathematics can be used in the analysis of natural phenomena
- understand the connections and interplay among various mathematical concepts and between mathematics and other disciplines
- understand and appreciate the positive contributions of mathematics, as a science and as an art, to civilization and culture.

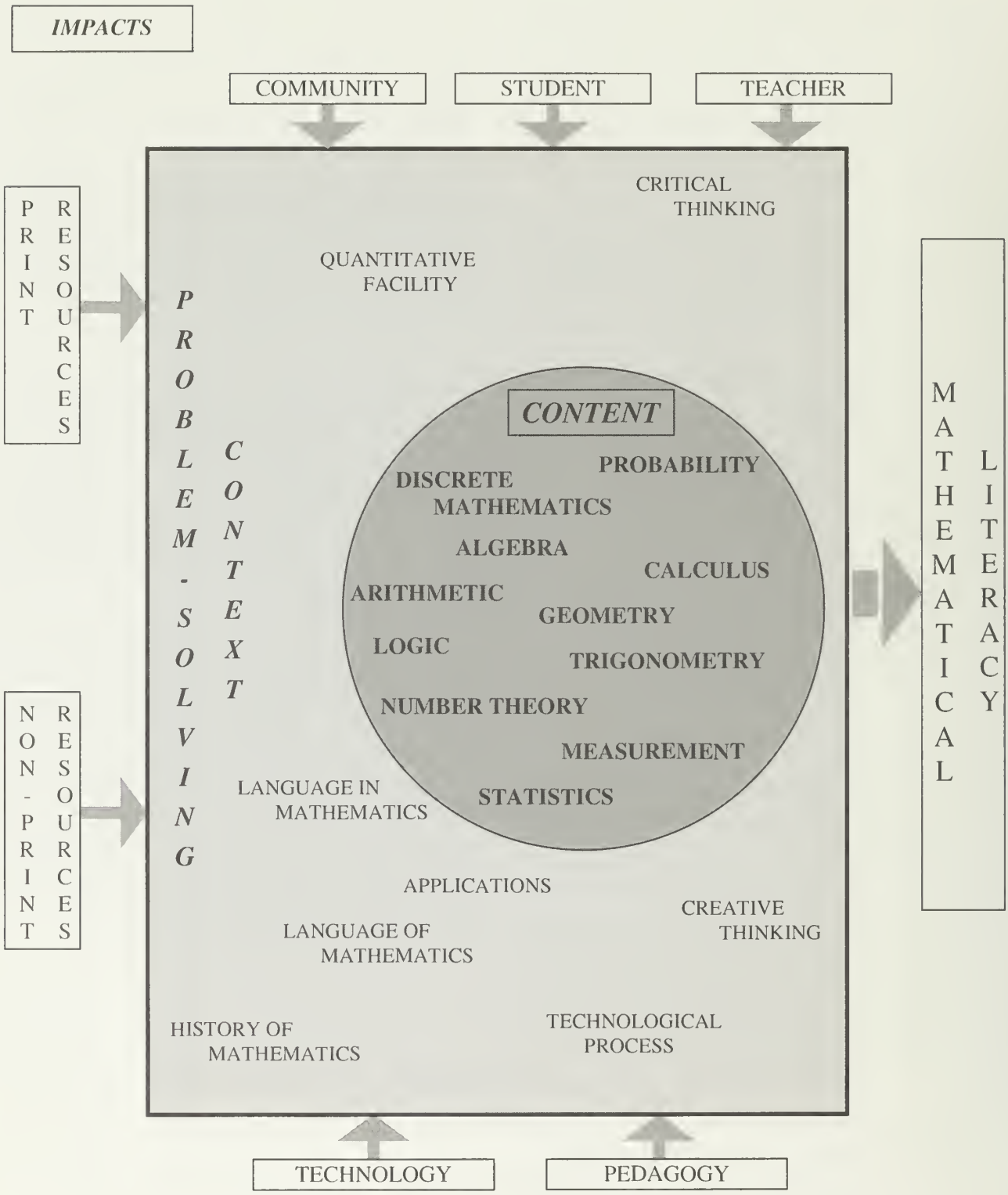
A General Model for Mathematical Literacy for Senior High School Programs, which outlines the factors that affect what and how students learn as they become mathematically literate, is presented on the following page. The model is fluid in that the content can be learned in a problem-solving context that engages any of a number of vehicles as the learning focus. At the same time, the students involved in the learning situation are affected in what and how they learn by forces that have impact on them.

The **Content** of the Senior High School Mathematics Program is the body of knowledge that is to be acquired by students. In the various senior high school mathematics courses, it is made up of topics that can be categorized into one or more of the listed strands.

In each course in the Senior High School Mathematics Program, students will focus on problem solving. The **Problem-solving Context** refers to the instruction emphases within which the specific content expectations can be acquired. The various entries indicated in the model suggest processes that belong to the problem-solving context and may be used by students as vehicles for learning the content.

The **Impacts** on the problem-solving context are those skills, attitudes and experiences that are possessed by the students and teachers involved, as well as the resources they may use throughout the learning process. They include the influence exerted by the culture and beliefs of the community as reflected by the school. The effectiveness of the context in enabling a student to acquire the content is dependent on the skillful management by the teacher of those items that have an impact on a student's learning.

A General Model for Mathematical Literacy for Senior High School Programs



C. SPECIFIC LEARNER EXPECTATIONS

PROGRAM ORGANIZATION

The major part of the content of each senior high school mathematics course consists of topics required of all students who take the course. The **required content** comprises 80 per cent of the course and contains the concepts, skills and attitudes that all students are expected to acquire. As well, the required portion of all courses includes specific expectations for problem solving and the use of technology.

Each course includes a compulsory component comprising 20 per cent of the course, made up of **elective material** that is consistent with the content and expectations of the required component. **The elective material provides for enrichment, remediation, or innovative or experimental presentations or activities. It is not intended to provide acceleration or advanced placement.** However, horizontal enrichment and extension is appropriate and students should have access to elective material that serves their individual needs and interests.

Evaluation of students in the Senior High School Mathematics Program will involve assessment of the level of achievement of all **of the learner expectations, including concepts, skills and attitudes, as well as problem-solving and technological expectations.** For more information regarding evaluation, consult the *Teacher Resource Manual for Senior High Mathematics*.

PROGRAM STRUCTURE

At the beginning of each course is a list of **attitude** expectations. These attitudes embody a mathematical attitude or frame of mind for a student to view the world. The attitude expectations should be woven into the fabric of the entire course.

Following this are the **problem-solving** expectations that outline a variety of procedures, strategies, skills and checking techniques for solving problems. Because a major purpose for studying mathematics is to learn to solve problems, problem-solving expectations occur throughout all areas of the specific learner expectations. Students must have the background skills and knowledge necessary to achieve these expectations successfully, using problem-solving techniques.

The units of the course are broken into a number of concepts. Each unit begins with an **overview** of the concepts and skills included in the unit. This indicates reasons why the unit is being studied and how these particular concepts and skills fit into the development of major mathematical concepts.

A **concept** is an abstract or general idea about specific instances that have common properties or an identifiable relationship to one another. The concepts are presented as mathematical definitions or theorems or as statements of mathematical ideas or abstractions.

Supporting each concept are a number of skills. **Skills** are intellectual or physical capabilities that will be developed in the context of the particular concept.

Skills specifically related to the use of **technology** identify areas in which scientific calculators and/or computer technology are applied by students as tools to be used for calculations, manipulation or graphing, or to aid in the analysis of problems. Technological expectations are defined explicitly throughout the learner expectations. In many cases, a particular technology is indicated for investigation or analysis. It is in these situations that the use of technology enables students to engage in critical and creative thinking and problem solving.

Students will be expected to learn how and when to use technology and have a demonstrated proficiency in **estimation** and **mental arithmetic**. To use technology effectively, they must be able to judge the reasonableness of an answer and understand the importance of making a judgment about the result of a calculation.

The words verify and prove appear throughout the learner expectations. For the purposes of the Senior High School Mathematics Program, they are interpreted as:

- Verify – to substantiate the validity of an operation, solution, formula or theorem through the use of examples that may or may not be generalized;
- Prove – to substantiate the validity of an operation, solution, formula or theorem in general and to provide logical arguments for each step in the process.

Attitudes

1. *Students will be expected to* demonstrate an attitude associated with mathematical literacy. In particular, students will be expected to:

    1.1 be confident in their mathematical knowledge and in their ability to acquire new knowledge
    1.2 demonstrate persistence, resolve, flexibility and ingenuity in finding the solution to problems
    1.3 develop intellectual curiosity and openness to new ideas, insights and change in the pursuit of mathematical knowledge
    1.4 exhibit an attitude of curiosity and spontaneity, and appreciate creativity and innovation in representing situations mathematically
    1.5 be critical and constructive in approaching new ideas and new processes
    1.6 be aware of the importance of communication skills in mathematics
    1.7 appreciate the usefulness of computational competence, mathematical processes and problem-solving skills that are used in the decision-making and modelling processes in our society
    1.8 appreciate the contributions of mathematics to our culture and civilization.

Problem Solving

1. *Students will be expected to* demonstrate an understanding of the variety of procedures that can be used to understand problems. In particular, students will be expected to:

    1.1 read the problem thoroughly
    1.2 identify and clarify key components
    1.3 restate the problem, using familiar terms
    1.4 evaluate the given information as to sufficiency and relevancy
    1.5 interpret pictures, charts and graphs
    1.6 determine hidden assumptions
    1.7 ask relevant questions
    1.8 identify given, needed and wanted information
    1.9 diagram or model the problem situation
    1.10 use suitable notation
    1.11 determine valid inferences
    1.12 simulate a problem situation
    1.13 formulate situations into identifiable problems.

2. *Students will be expected to* develop a variety of strategies for use in the solution of mathematical problems. In particular, students will be expected to:

   2.1 conduct an investigation
   2.2 use estimation and approximation
   2.3 develop equations or use formulas
   2.4 use flow charts
   2.5 make lists and charts
   2.6 look for patterns
   2.7 work backward
   2.8 break the problem into smaller parts
   2.9 look for a simpler or related problem
   2.10 make diagrams or models
   2.11 use manipulatives
   2.12 choose and sequence a series of mathematical operations
   2.13 sketch the graph of a problem situation
   2.14 establish procedures to gather and organize data
   2.15 apply empirical or inductive processes
   2.16 use geometric construction and measurement techniques
   2.17 make and test a conjecture.

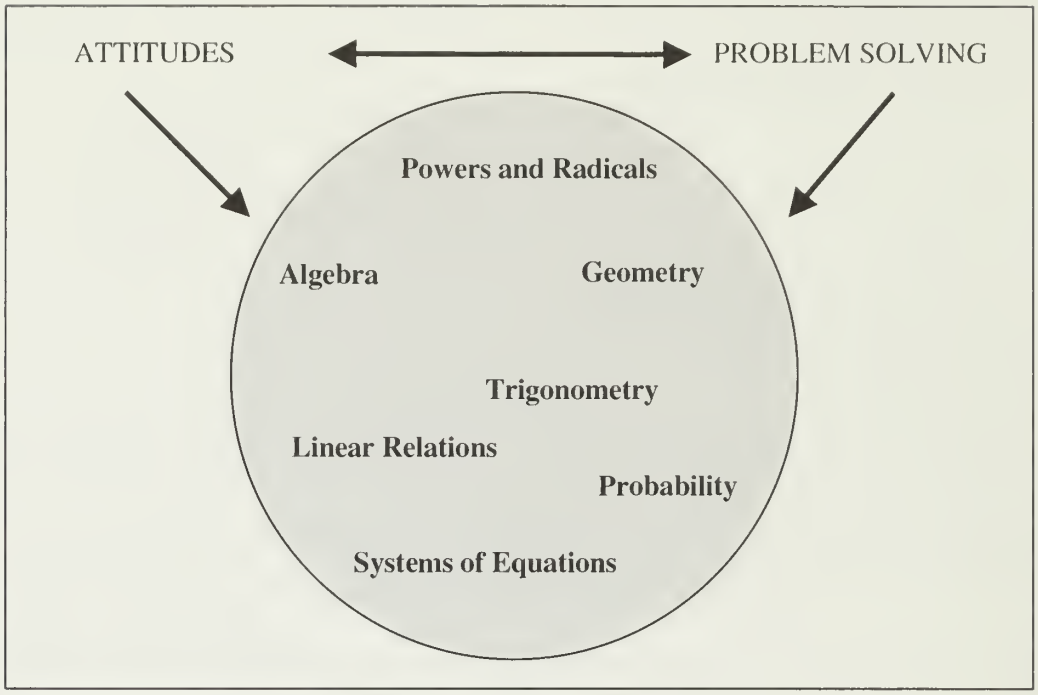
3. *Students will be expected to* develop a variety of skills that can be used to carry out the plan for the solution of a problem. In particular, students will be expected to:

   3.1 apply selected strategies
   3.2 present ideas clearly
   3.3 document the solution process
   3.4 use appropriate group behaviours
   3.5 use scientific graphing calculators and/or computers
   3.6 evaluate problem-solving strategies for effectiveness
   3.7 alter or abandon non-productive strategies
   3.8 search for additional information
   3.9 ask questions
   3.10 be open to inspirations, intuitions and "bright ideas".

4. *Students will be expected to* employ a variety of skills to help them look back over the solution of a problem. In particular, students will be expected to:

   4.1 determine the reasonableness of an answer
   4.2 explain the solution in oral or written form
   4.3 consider the possibility of additional solutions
   4.4 search for other strategies and processes of solution
   4.5 create and solve similar problems
   4.6 note the characteristics that will be identifiable in similar problems
   4.7 make a generalization
   4.8 examine the assumptions made and simplifications and modifications used for accuracy, effectiveness and efficiency.

MATHEMATICS 23 PROGRAM STRUCTURE



POWERS AND RADICALS

1. *Students will be expected to* demonstrate an understanding of the relationship between radicals and exponents.

   Students will be expected to:

   1.1 use the following terms as they occur in the study of radicals: index, radicand, radical sign, root

   1.2 transform expressions of the form $x^{a/b}$ to $\sqrt[b]{x^a}$ or $\left(\sqrt[b]{x}\right)^a$ and vice versa where x is a rational number, a is a natural number and $b = 2$

   1.3 calculate approximations for the square and cube roots of rational numbers

      1.3.1 find approximations for square and cube roots of rational numbers by using a calculator.

2. *Students will be expected to* demonstrate an understanding of how interest accumulates, if it is allowed to compound.

   Students will be expected to:

   2.1 calculate compound interest by using an iterative process
   2.2 calculate compound interest using the formula $A = P(1 + i)^n$, where A is the amount (principal and interest), i is the interest rate per conversion period and n is the number of periods

      2.2.1 use a calculator or spreadsheet in the calculation of compound interest
      2.2.2 solve problems involving the calculation of compound interest.

ALGEBRA

1. *Students will be expected to* demonstrate an understanding that equations and inequalities express mathematical relationships and can be used to model physical relationships.

   Students will be expected to:

   1.1 solve and verify the solution of any first degree equation in one variable by applying formal algebraic procedures

      1.1.1 represent problems with equations, and solve problems through the solution of the equations

   1.2 solve formulae for given subjects
   1.3 solve, graph and verify the solution of first degree inequalities in one variable

      1.3.1 represent problems with inequalities, and solve problems through the solution of the inequalities.

2. *Students will be expected to* demonstrate an understanding that polynomials can be written as a product of their factors.

   Students will be expected to:

   2.1 factor (over the integers) trinomials of the form $ax^2 + bx + c$, $a, b, c \in I$
   2.2 differentiate between quadratic expressions and quadratic equations
   2.3 solve and verify the solution of quadratic equations that can be factored

      2.3.1 use a graphing calculator or graphic computer software to recognize the relationship between the solutions to a quadratic equation and its corresponding graph

   2.4 solve and verify the solution of quadratic equations that can be reduced easily to $x^2 = a$

      2.4.1 use a graphing calculator or graphic computer software to recognize the relationship between the solutions to a quadratic equation and its corresponding graph.

LINEAR RELATIONS

1. *Students will be expected to* demonstrate an understanding that the equations and graphs of linear relations can be determined uniquely from given characteristics of the relation.

   Students will be expected to:

   1.1 write the equation and draw the graph of a linear relation given its slope and the y-intercept
   1.2 write the equation and draw the graph of a linear relation given any two points
   1.3 write equations and draw the graph of a linear relation given a point and a slope
   1.4 write the equation and draw the graph of a linear relation given a point and the equation of a parallel or perpendicular line
   1.5 write the equation and draw the graph of a linear relation given any combination of characteristics that uniquely define it

1.5.1 use calculators or computers to draw graphs of linear relations
1.5.2 solve problems that involve writing the equations or drawing the graphs of linear relations
1.5.3 interpret the equations of linear relations that represent physical phenomena.

SYSTEMS OF EQUATIONS

1. *Students will be expected to* demonstrate an understanding that some mathematical circumstances can be represented algebraically by a system of two equations in two unknowns.

   Students will be expected to:

   1.1 solve systems of linear equations in two unknowns graphically

      1.1.1 use a graphing calculator or graphic computer software to graph two linear equations
      1.1.2 solve problems involving the graphs of two linear equations

   1.2 solve systems of linear equations in two unknowns algebraically

      1.2.1 solve problems that can be represented by a system of two linear equations in two unknowns.

PROBABILITY

1. *Students will be expected to* demonstrate an understanding that probability describes the likelihood of the occurrence of an event and is a number between 0 and 1.

   Students will be expected to:

   1.1 use the language of probability
   1.2 determine the sample space for simple events
   1.3 determine the probability of simple events through experiments

      1.3.1 carry out an investigation to determine the experimental probability of an event

   1.4 determine the theoretical probability of events that have easily countable sample spaces

      1.4.1 compare theoretical probabilities to those for the same event generated empirically.

2. *Students will be expected to* demonstrate an understanding that the probability of a compound event can be determined from the probability of the individual events.

   Students will be expected to:

   2.1 find the probability of two or more events occurring together by the application of the multiplication law for independent events, $P(A \text{ and } B) = P(A) \times P(B)$, and for dependent events, $P(A \text{ and } B) = P(A) \times P(B|A)$

      2.1.1 solve problems that involve finding the probability of the occurrence of two or more events
      2.1.2 determine experimentally the probability of two or more events occurring together, and compare it to the theoretical probability.

GEOMETRY

1. *Students will be expected to* demonstrate an understanding that within closed two-dimensional figures, there are relationships amongst the sides and angles.

   Students will be expected to:

   1.1 determine patterns that can be used to discover relationships pertaining to closed polygons

      1.1.1 determine the sum of the interior angles of any polygon
      1.1.2 determine the relationship between the number of sides and diagonals in a polygon

   1.2 determine patterns to develop a formula for perimeter, which is the distance around a figure or an object

      1.2.1 calculate the perimeter of any regular polygon
      1.2.2 solve problems involving the perimeter of regular polygons
      1.2.3 determine that the ratio between the circumference and diameter of a circle is constant
      1.2.4 solve problems involving the circumference of circles

   1.3 determine patterns to develop a formula for area that is a measure of the number of non-overlapping square units that can be enclosed within a figure

      1.3.1 calculate the area of any regular polygon
      1.3.2 calculate the areas of irregular regions that can be subdivided into regular polygons
      1.3.3 solve problems involving the area of polygons
      1.3.4 determine what figure encloses the largest area for a given perimeter
      1.3.5 calculate the area of a circle.

2. *Students will be expected to* demonstrate an understanding that within three-dimensional figures, there are relationships amongst the sides, edges and vertices.

   Students will be expected to:

   2.1 determine patterns that can be used to discover relationships pertaining to three-dimensional figures

      2.1.1 determine the relationship between the number of edges, vertices and faces in a simple polyhedron (Euler's formula $V - E + F = 2$)
      2.1.2 determine the relationship between the number of faces and diagonals in a polyhedron

   2.2 determine patterns to develop a formula for the surface area of a rectangular solid, cone, sphere, cylinder and pyramid

      2.2.1 calculate the surface area of a rectangular solid, cone, sphere, cylinder and pyramid
      2.2.2 calculate the surface area of irregular solids that can be subdivided
      2.2.3 solve problems involving surface area for regular and irregular solids

   2.3 determine patterns to develop a formula for the volume of regular solids (area of base times height)

      2.3.1 calculate the volume of regular solids (area of base times height)
      2.3.2 calculate the volume of irregular solids that can be subdivided

2.3.3 solve problems involving the volume of regular and irregular solids
2.3.4 determine what figure encloses the greatest volume for a given surface area.

TRIGONOMETRY

1. *Students will be expected to* demonstrate an understanding that two triangles are similar if corresponding angles are equal and the lengths of the corresponding sides are proportional.

   Students will be expected to:

   1.1 identify and express the similarity correspondences between similar triangles
   1.2 use the relationship between the lengths of the sides of similar triangles to calculate the lengths of unknown sides

      1.2.1 derive the properties of similar triangles experimentally
      1.2.2 solve problems involving the use of the properties of similar triangles
      1.2.3 use the properties of similar triangles to investigate the sine, cosine and tangent ratios in similar right triangles.

2. *Students will be expected to* demonstrate an understanding that the sine, cosine and tangent ratios of a given angle are particular ratios between pairs of sides of a right triangle.

   Students will be expected to:

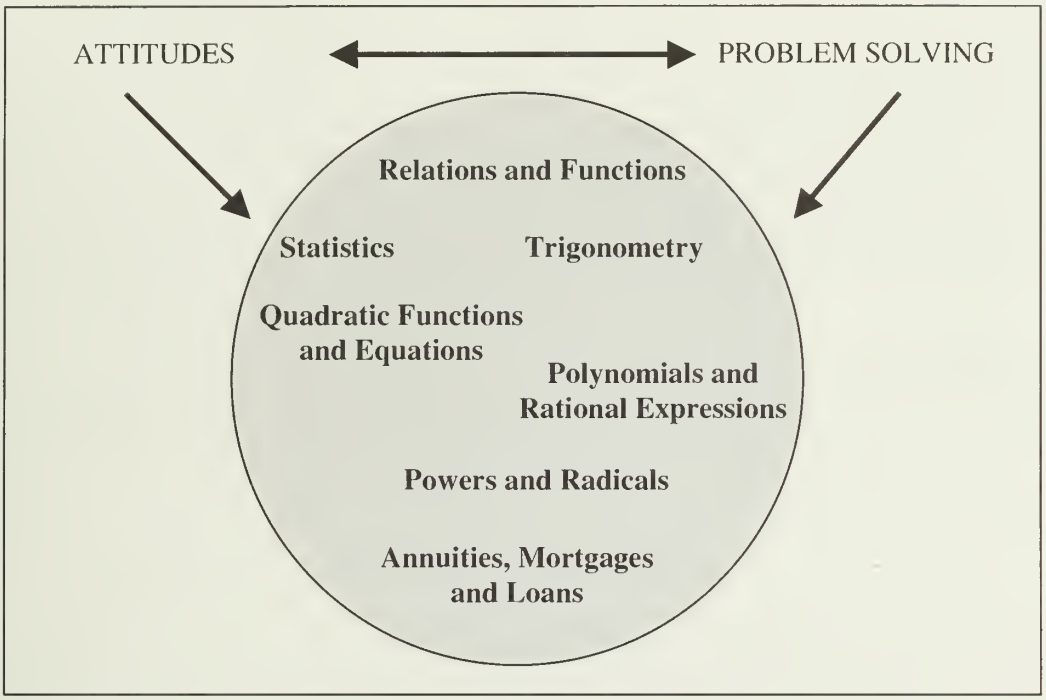
   2.1 find the sine, cosine and tangent ratios, and the measures of the acute angles within right triangles, given the measures of any two sides

      2.1.1 find the sine, cosine and tangent ratios of any acute angle, using a calculator
      2.1.2 find the measure of an acute angle given the value of one of the trigonometric ratios of the angle, using a calculator
      2.1.3 solve problems in which an acute angle measure in a right triangle must be found

   2.2 find the measure of a side of a right triangle given the measure of an acute angle and the length of a side

      2.2.1 solve problems in which the length of a side of a right triangle is unknown.

MATHEMATICS 33 PROGRAM STRUCTURE



POWERS AND RADICALS

Overview

This unit looks at powers and exponents, integers as exponents, approximating square roots, rational exponents, the Pythagorean relation, operation with radicals, using calculators with powers and radicals, solving problems and application. Historically, the reason for studying radicals was to make the estimation of a rational number calculation easier. With the advent of technology the value of performing basic operation radicals should speed up this process.

Learner Expectations

1. *Students will be expected to* demonstrate an understanding that radical expressions and equations can be simplified by performing basic operations on numbers and expressions written in radical form.

   Students will be expected to:

   1.1 change the form of second and third order radicals from mixed to entire and vice versa
   1.2 perform the operations of addition, subtraction, multiplication and division involving second order radicals

      1.2.1 rationalize radicals with monomial denominators involving one second order expression

   1.3 solve second order radical equations

      1.3.1 solve problems involving radical equations.

ANNUITIES, MORTGAGES AND LOANS

Overview

Topics in this unit can be made more relevant and immediate for the students by using items from current newspapers, banks, lending and investment institutions. These items may include advertisements for retirement plans, investments, bonds, mortgages, savings plans and annuities. Students will learn to differentiate between mortgages and loan payments. Using tables, as opposed to calculating annuities as a geometric series, students will learn different aspects of financing. This section provides a real-life experience using mathematics. Through problem solving (e.g., how the repayment schedule on loans and mortgages works; the effects on the amount borrowed, interest rates, number of payments over a certain period), the student can attain basic skills.

Learner Expectations

1. *Students will be expected to* demonstrate an understanding that an annuity is a sequence of payments paid in regular intervals.

   Students will be expected to:

   1.1 calculate the amount and present value of an annuity, using tables or calculators

      1.1.1 solve simple problems involving the amount and present value of an annuity
      1.2.2 use a calculator or computer spreadsheet to help calculate the amount and present value of an annuity

2. *Students will be expected to* demonstrate an understanding that the repayment schedule on loans and mortgages is determined by the amount borrowed, the interest rate, the number of payments and the total time over which repayment occurs.

   Students will be expected to:

   2.1 differentiate between a mortgage and other types of loans
   2.2 calculate mortgage and loan payments, using tables

      2.2.1 solve problems involving the calculation of payments on loans and mortgages
      2.2.2 use a calculator or computer to help in the solution of problems involving loans and mortgages.

STATISTICS

Overview

Statistics forms a very essential part of the modern mathematics curriculum. The daily barrage of information must not only be understood but also used by students. Statistics includes all the background thinking that occurs long before any work is done.

The techniques and skills used include bivariate data on a scatter plot, strength and direction of the correlation between two variables. The line and equations can be used to make predictions. Surveys are an integral part of inferential statistics and students must understand that the results of surveys can be interpreted with measurable degrees of confidence. The knowledge of this type of mathematics will help students become intelligent consumers who can make critical and informed decisions.

Learner Expectations

1. *Students will be expected to* demonstrate an understanding that a bivariate distribution involves two variables that may have some relationship to each other.

   Students will be expected to:

   1.1 plot sets of bivariate data on a scatter plot
   1.2 plot a line of best fit on a scatter plot, using the median fit method
   1.3 develop and use prediction equations of the line of best fit to make inferences for populations
   1.4 determine the apparent correlation between the variables of a bivariate distribution from a scatter plot, including the strength and direction of the correlation
   1.5 collect, organize and analyze sets of bivariate data

      1.5.1 apply statistical processes and statistical reasoning in **investigations** involving bivariate data.

2. *Students will be expected to* demonstrate an understanding that the results of a survey can be interpreted with measurable degrees of confidence.

   Students will be expected to:

   2.1 distinguish between a population and a sample and assess the strengths, weaknesses and biases of given samples
   2.2 collect and organize the results of yes/no surveys taken from defined samples

      2.2.1 design and administer a simple survey
      2.2.2 collect and organize the results of a simple survey

   2.3 draw box plots of the results of multiple samples (50 per cent and 90 per cent box plots)

      2.3.1 carry out investigations involving multiple samples taken from populations with known and unknown proportions of yes responses

   2.4 use charts of 90 per cent box plots to find the confidence interval within which a survey result can be interpreted

      2.4.1 use statistical inferences to solve problems based on 90 per cent confidence intervals

   2.5 draw statistical conclusions, make inferences to populations and explain the confidence with which such conclusions and inferences are made based on the results of yes/no surveys

      2.5.1 design and administer a survey to a random sample of a population, collect and organize the responses, and analyze the results, including making inferences to the population and evaluating the results for the confidence with which they may be held.

TRIGONOMETRY

Overview

The main focus of this unit is the property and theorems related to trigonometry. The study of trigonometry builds on the understanding of the trigonometric ratios and how to use these ratios to solve problems, and on the study of functions. The ratios of right-angle trigonometry are generalized to both trigonometric and circular functions. Understanding of these functions and the connections between

geometry and algebra are important in the future development of such topics. Students are able to see the relationship between right-angle triangles and the oblique type of triangle, through the development of the sine and cosine law. The final section offers many practical applications requiring students to use the Law of Sines and Cosines.

Learner Expectations

1. *Students will be expected to* demonstrate an understanding that angles can be drawn on a coordinate plane and that their trigonometric ratios can be determined with respect to the coordinates of points on the plane.

   Students will be expected to:

   1.1 recognize and sketch positive and negative angles in standard position on a coordinate plane

      1.1.1 define and determine principle and co-terminal angles in a coordinate plane

   1.2 determine the reference angle for an angle drawn in standard position on a coordinate plane
   1.3 express the trigonometric ratios for any angle, θ, in standard position on a coordinate plane in terms of x, y and r, where r is the length of the terminal side and (x, y) the coordinates of the end-point
   1.4 determine the sine, cosine and tangent ratios for any angle

      1.4.1 use a calculator to determine the sine, cosine and tangent ratios of any angle

   1.5 determine any two values of x, y, r and θ given the other two
   1.6 use a graphing calculator or computer to investigate the graphs of the sine curve

      1.6.1 use a graphing calculator or computer to investigate the effects of the parameter a, b, of the function $y = a \sin bx$.

2. *Students will be expected to* demonstrate an understanding that the methods used in the solution of right triangles can be used to develop laws for use in the solution of oblique triangles.

   Students will be expected to:

   2.1 find the measures of sides and angles in diagrams involving multiple right triangles in two or three dimensions

      2.1.1 solve problems involving multiple right triangles in two or three dimensions

   2.2 find the measures of unknown sides and angles in oblique triangles by applying the sine law

      2.2.1 illustrate the sine law, using examples
      2.2.2 solve problems, using the ambiguous case of the sine law
      2.2.3 illustrate the ambiguous case of the sine law

   2.3 find the measures of unknown sides and angles in oblique triangles by applying the cosine law

      2.3.1 recognize that the cosine law is the generalization of the Pythagorean theorem
      2.3.2 illustrate the cosine law, using examples
      2.3.3 solve problems, using the cosine law.

POLYNOMIALS AND RATIONAL EXPRESSIONS

Overview

In this unit, the student will be exposed to rational expressions (algebraic fractions) of polynomials. The student will explore non-permissible values of rational expression; what happens to the expression when a certain value is substituted for the denominator. Factoring will play a very important role in simplifying these rational expressions. Operations with addition, subtraction, multiplication and dimension can be performed on such expressions. Solving problems involving equations containing rational expressions will help the students understand their application.

Learner Expectations

1. *Students will be expected to* demonstrate an understanding that rational expressions are fractions in which the numerators and denominators are polynomials and that operations can be performed on such expressions.

   Students will be expected to:

   1.1 determine the non-permissible values in rational expressions in one variable

      1.1.1 use a graphing calculator and/or computers to graph rational functions to determine non-permissible values

   1.2 simplify rational expressions by factoring
   1.3 perform the operations of multiplication and division on rational expressions
   1.4 perform the operations of addition and subtraction on rational expressions
   1.5 solve equations involving rational expressions

      1.5.1 solve problems involving equations containing rational expressions.

RELATIONS AND FUNCTIONS

Overview

This unit introduces the concept of relations and functions with an emphasis on graphical representation. Interpreting and graphing relations are reviewed. Linear and non-linear relations are illustrated through graphical representations, and their domain and range are determined.

Functions are introduced as special relations that satisfy certain conditions (e.g., vertical line test). Functional notation and evaluating functions using functional notation are discussed. The inverse of a function is determined in the same way as the universe of a relation. The final section of this unit deals with the various transformations of functions from the form $y = f(x)$ to $y = cf(x - a) + b$.

Learner Expectations

1. *Students will be expected to* demonstrate an understanding that certain observed real-world phenomena are quantitatively related and that these relations can be described graphically, with sets of ordered pairs, rules and equations.

   Students will be expected to:

   1.1 graph relations that describe physical phenomena or everyday situations

1.1.1 solve problems by graphing and interpreting the graphs that describe physical phenomena and everyday occurrences

1.2 determine the domain and range of the relations from graphs and sets of ordered pairs.

2. *Students will be expected to* demonstrate an understanding that for some relations, called functions, the value of the independent variable (domain) uniquely determines the value of the dependent variable (value of the function, range).

Students will be expected to:

2.1 represent simple mathematical situations such as direct and inverse variations with tables of values, identify the dependent and independent variables, and express the domain and range, appropriately noting any restrictions
2.2 interpolate and extrapolate from the graphs of simple functional relationships
2.3 use functional notation and graphs to describe simple relationships and evaluate them by substituting appropriate replacements of the domain

2.3.1 solve problems algebraically or by using and interpreting graphs that represent functions

2.4 illustrate and recognize different kinds of functions algebraically and graphically from the following list: linear functions, polynomial functions (including quadratic and cubic functions), reciprocal functions, absolute value functions and exponential functions

2.4.1 draw and analyze the graphs of functions using calculators and computers
2.4.2 analyze the graphs of the inverse of functions (e.g., linear, quadratic, reciprocals).

3. *Students will be expected to* demonstrate an understanding of how particular parameters can be used to effect translations, reflections or vertical stretchings of any function.

Students will be expected to:

3.1 describe the transformation effects on the graph of $y = f(x)$ of the parameters a and b in $y = f(x - a) + b$

3.1.1 investigate the effects of the parameters a and b on the graph of $y = f(x - a) + b$

3.2 describe the transformation effects on the graph of $y = f(x)$ of the parameter c in $y = cf(x)$

3.2.1 investigate the effects of the parameter c on the graph of $y = cf(x)$

3.3 describe and sketch the graphs of $y = cf(x - a) + b$

3.3.1 use a graphing calculator and/or computers to graph functions in the form $y = cf(x - a) + b$.

QUADRATIC FUNCTIONS AND EQUATIONS

Overview

This unit analyzes quadratic functions with respect to graphs and solving quadratic equations with graphs. The graphs are used to determine the domain and range, the maximum or minimum points, the axis of symmetry, x- and y-intercepts, and the direction of opening of quadratic functions. The equation

form of the quadratic function is converted from the general form $y = ax^2 + bx + c$ to the more convenient standard form $y = a(x - h)^2 + k$.

Quadratic equations will be solved using various methods, such as factoring, completing the square and the development of the quadratic formula. The unit will discuss solving problems that involve equations with radicals and rational expressions whose solutions are the roots of quadratic equations.

Learner Expectations

1. *Students will be expected to* demonstrate an understanding that any function that can be written in the form $y = ax^2 + bx + c$, $a \neq 0$, is a quadratic function and that individual quadratic functions have unique characteristics and graphs.

   Students will be expected to:

   1.1 sketch the graphs of quadratic functions written in standard form, $y = a(x - h)^2 + k$

      1.1.1 investigate the effects of the parameters a, h and k in $y = a(x - h)^2 + k$ using a graphing calculator or computer

   1.2 transform quadratic functions from the general form $y = ax^2 + bx + c$ to the standard form $y = a(x - h)^2 + k$ by completing the square

      1.2.1 find the vertex, axis of symmetry, domain, range, maximum or minimum values and y-intercepts of a quadratic function
      1.2.2 solve problems that involve quadratic functions, by analyzing the functions in graphical or equation form.

2. *Students will be expected to* demonstrate an understanding that finding the x-intercepts of the quadratic function $y = ax^2 + bx + c$ is equivalent to solving the quadratic equation $ax^2 + bx + c = 0$.

   Students will be expected to:

   2.1 use the quadratic formula to solve quadratic equations

      2.1.1 determine the x-intercepts of the quadratic function
      2.1.2 solve problems that involve quadratic equations

   2.2 recognize and explain the relationship between the x-intercepts of the quadratic functions and the roots of their corresponding equations
   2.3 solve equations with radicals and rational expressions whose solutions are the roots of quadratic equations

      2.3.1 solve problems that involve equations with radicals and rational expressions whose solutions are the roots of quadratic equations.

PERSONAL DEVELOPMENT

CONTENTS

Health and Personal Development 10

Career and Life Management 20

Occupations 10

Physical Education (K–12)

PHYSICAL EDUCATION

A. PROGRAM RATIONALE AND PHILOSOPHY

The aim of the Kindergarten to Grade 12 physical education program is to enable individuals to develop the knowledge, skills and attitudes necessary to lead an active, healthy lifestyle.

Alberta's vision for education focuses on children and their ability to achieve their individual potential, creating a positive future for themselves, as well as enhancing their quality of life. The Kindergarten to Grade 12 physical education program contributes to the development of life skills for the personal management of health, for the use of physical activity as a strategy for managing life challenges, and for a setting within which to practise the ability to work with others. The program provides an equitable opportunity for all students to realize the benefits of participation in physical activity.

Education is a shared responsibility involving students, parents, teachers, the school and the community. Within each day, whether at home, school, or in the community, there is structured and unstructured time available for meeting the aim of the physical education program that contributes to student well-being. As the benefits of physical activity increase proportionally as a result of the time and intensity provided, consideration should be given to maximizing the amount of time available within the school context. An approach that is sensitive to developmental and culturally appropriate practice, and that emphasizes enjoyable participation, is most likely to foster a desire in students to participate in lifelong physical activity.

Physical activity is vital to all aspects of normal growth and development, and the benefits are widely recognized. Students do not develop automatically the requisite knowledge, skills and attitudes that lead to active, healthy lifestyles. Such learning should begin in childhood. Schools and teachers can be prime facilitators in providing opportunities for the development of the desire for lifelong participation in physical activity.

Active Living

The physical education program emphasizes active living, with a focus on physical activity that is valued and integrated into daily life.

Active living through physical education:

- creates a desire to participate
- focuses on lifetime activities promoting health-related fitness for life
- is about physical activity; and the nature, form, frequency and intensity of the activity are relative to each person's ability, needs aspirations and environment
- places physical activity within a broader perspective of total fitness and well-being that encompasses the entire experience of

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movement—physical, mental, emotional and social dimensions
- is enhanced through opportunities to participate in such activities as intramural and interschool athletics and community-based sport and recreation activities
- is centred around learner needs; inclusive, individual and varied
- is supported when opportunities for making choices are provided
- is supportive of the relevance of physical activity within the community.

Benefits of Physical Education and Activity

Strong evidence exists that physical activity contributes to the overall well-being of individuals. People of all ages can substantially improve their health and quality of life by including a moderate amount of physical activity into their daily routines. Participation in physical activity contributes to physical, mental and social well-being providing benefits to the individual and the community. Below are some reasons why students need physical education on a regular basis.

- Health
  Participation in physical activity can improve fitness—muscular strength, flexibility, muscular endurance, body composition and cardiovascular endurance—and reduce the risk factors related to heart disease, including obesity and high blood pressure. Regular physical activity increases bone density to create a stronger skeleton. It can be an outlet for releasing tensions and anxieties in the promotion of mental health.

- Active Lifestyle
  Physical activity, over time, is beneficial to personal well-being. Physical education promotes personal responsibility for health and fitness and for students to develop a desire to participate for life.

- Skill Development
  Physical education develops physical skills that allow for enjoyable and successful participation in movement activities. Students perceived competence is a key determinant for future involvement in physical activity.

- Positive Interactions
  Interaction with others is an important aspect of most physical activities. Physical education provides a natural learning environment in which to develop cooperation and fair play skills. For example, students have opportunities to assume leadership, develop teamwork skills, officiate and take responsibility for their actions while playing.

- Self-confidence and Self-esteem
  Physical activity can instill a strong sense of self-worth in students. They can become more confident, assertive and independent.

- Goal Setting
  Physical education provides opportunities for students to practise goal setting as they participate.

- Economic
  Physical activity can improve health, which reduces the cost of health care for individuals and the community.

- Academic Achievement
  Time allocation for physical education programs does not limit academic achievement; in fact, it can contribute to increased achievement levels; i.e., active bodies/active minds.

Student Learning and Achievement

Students will meet the aim of the physical education program, to lead an active, healthy lifestyle, if they have developed a desire to participate regularly in physical activity. The aim can only be achieved by addressing the prescribed outcomes within an environment wherein students are emotionally and physically safe, the climate is

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positive, and a variety of developmentally appropriate skill-building experiences are provided.

Curriculum experiences provide students with opportunities to develop the habit of being active daily, the skills to enjoy successful participation, and to realize the benefits resulting from activity. This is the focus of an "active living" approach.

There are many factors to be considered in providing a context wherein students can achieve. Planning will help to determine ways in which to provide a program that addresses the outcomes and meets the diverse needs of learners. Some of the factors to consider when planning include:

- activity that is relevant, meaningful and enjoyable
- student equity and diversity
- alignment of learning outcomes, instructional and assessment practices
- practices that apply the principles of learning
- experiences from all movement dimensions
- opportunities to practise and demonstrate growth and achievement
- elements of risk and challenge provided in a safe environment
- consideration of, and for, past related experiences
- time allocation
- teacher willingness and expertise
- diversity of instructional strategies
- focus on outcomes rather than dimensions
- facilities and equipment resources
- use of community resources
- use of technology
- assessment, evaluation and communication of student learning
- transference to lifelong participation in physical activity.

Exemptions

To meet the aim of the program it is recommended that a variety of movement experiences be provided in all the dimensions. In the following specified circumstances; however, exemptions may be warranted from one or more dimensions and/or a physical education course.

Category	Conditions for Exemption	Procedures	Other Experiences
INDIVIDUAL	Religious beliefs	• Statement in writing from parent to principal.	• When exemption is granted, other activities consistent with the aim and outcomes of the program should be substituted, where appropriate.
INDIVIDUAL	Medical	• Certification to principal by medical practitioner with statement of activities in which the student is not able to participate.	
CLASS, GRADE OR SCHOOL	Access to facilities	• Initiated by school authority or parent. • Approved by school authority.	

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B. GENERAL AND SPECIFIC OUTCOMES

The four **general outcomes** upon which the Kindergarten to Grade 12 physical education program is based state that *students will*:

Activity

- acquire skills through a variety of developmentally appropriate movement activities; dance, games, types of gymnastics, individual activities and activities in an alternative environment; e.g., aquatics and outdoor pursuits

Benefits Health

- understand, experience and appreciate the health benefits that result from physical activity

Cooperation

- interact positively with others

Do it Daily ... for Life!

- assume responsibility to lead an active way of life.

The general outcomes are interrelated and interdependent. Each is to be achieved through a variety of physical activities. Students must have the opportunity for participation in each of the following dimensions:

- dance
- games
- types of gymnastics
- individual activities
- activities in an alternative environment; e.g., aquatics and outdoor pursuits.

Each general outcome includes **specific outcomes**, by grade, and at the senior high school level by course name. Students are expected to demonstrate these outcomes, to the best of their ability, by the end of each grade/course.

Program planning requires consideration of student age, grade level, individual abilities and developmental readiness. Assessment, evaluation and communication of student achievement requires consideration of such factors as practice time, individual growth and development, and overall improvement.

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GENERAL OUTCOMES

The aim of the Kindergarten to Grade 12 physical education program is to enable individuals to develop the knowledge, skills and attitudes necessary to lead an active, healthy lifestyle.

General Outcome A

***Students will* acquire skills through a variety of developmentally appropriate movement activities; dance, games, types of gymnastics, individual activities and activities in an alternative environment; e.g., aquatics and outdoor pursuits.**

- Basic Skills; Locomotor; Nonlocomotor; Manipulative
- Application of Basic Skills in an Alternative Environment; i.e., Aquatics and Outdoor Pursuits; Dance, Games, Types of Gymnastics, Individual Activities

General outcomes B, C and D are interrelated and interdependent and are achieved through involvement in movement activities identified in General Outcome A.

General Outcome B

***Students will* understand, experience and appreciate the health benefits that result from physical activity.**

- Functional Fitness
- Body Image
- Well-being

General Outcome C

***Students will* interact positively with others.**

- Communication
- Fair Play
- Leadership
- Teamwork

General Outcome D

***Students will* assume responsibility to lead an active way of life.**

- Effort
- Safety
- Goal Setting/Personal Challenge
- Active Living in the Community

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GENERAL OUTCOME A

Students will acquire skills through a variety of developmentally appropriate movement activities; dance, games, types of gymnastics, individual activities and activities in an alternative environment; e.g., aquatics and outdoor pursuits.

Kindergarten [AK–]	Grade 1 [A1–]	Grade 2 [A2–]	Grade 3 [A3–]

Students will:

Basic Skills—Locomotor; e.g., walking, running, hopping, jumping, leaping, rolling, skipping, galloping, climbing, sliding, propulsion through water

AK–1	experience and develop locomotor skills through a variety of activities	A1–1	perform locomotor skills through a variety of activities	A2–1	select and perform locomotor skills involved in a variety of activities	A3–1	respond to a variety of stimuli to create locomotor sequences
AK–2	N/A	A1–2	N/A	A2–2	N/A	A3–2	N/A

Basic Skills—Nonlocomotor; e.g., turning, twisting, swinging, balancing, bending, landing, stretching, curling, hanging

AK–3	experience and develop nonlocomotor skills through a variety of activities	A1–3	perform nonlocomotor skills through a variety of activities	A2–3	select and perform nonlocomotor skills involved in a variety of activities	A3–3	respond to a variety of stimuli to create nonlocomotor sequences
AK–4	N/A	A1–4	N/A	A2–4	N/A	A3–4	N/A

Basic Skills—Manipulative: receiving; e.g., catching, collecting; retaining: e.g., dribbling, carrying, bouncing, trapping: sending; e.g., throwing, kicking, striking

AK–5	experience and develop ways to receive, retain and send an object, using a variety of body parts and implements and through a variety of activities	A1–5	demonstrate ways to receive, retain and send an object, using a variety of body parts and implements, individually and with others	A2–5	select and perform ways to receive, retain and send an object, using a variety of body parts and implements, individually and with others	A3–5	demonstrate ways to receive, retain and send an object, using a variety of body parts and implements; and, perform manipulative skills individually and with others while using a variety of pathways
AK–6	N/A	A1–6	N/A	A2–6	N/A	A3–6	N/A

All outcomes are achieved through active and safe participation in physical education.

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GENERAL OUTCOME A

Students will acquire skills through a variety of developmentally appropriate movement activities; dance, games, types of gymnastics, individual activities and activities in an alternative environment; e.g., aquatics and outdoor pursuits.

Grade 4 [A4–]	Grade 5 [A5–]	Grade 6 [A6–]
Students will:		
Basic Skills—Locomotor; e.g., walking, running, hopping, jumping, leaping, rolling, skipping, galloping, climbing, sliding, propulsion through water		
A4–1 select, perform and refine simple locomotor sequences	A5–1 select, perform and refine more challenging locomotor sequences	A6–1 select, perform and refine challenging locomotor sequences
A4–2 consistently and confidently perform locomotor skills and combination of skills, by using elements of body and space awareness, effort and relationships to a variety of stimuli to improve personal performance	A5–2 consistently and confidently perform locomotor skills and combination of skills, by using elements of body and space awareness, effort and relationships to a variety of stimuli to improve personal performance	A6–2 consistently and confidently perform locomotor skills and combination of skills, by using elements of body and space awareness, effort and relationships, alone and with others, to improve personal performance
Basic Skills—Nonlocomotor; e.g., turning, twisting, swinging, balancing, bending, landing, stretching, curling, hanging		
A4–3 select, perform and refine simple nonlocomotor sequences	A5–3 select, perform and refine more challenging nonlocomotor sequences	A6–3 select, perform and refine challenging nonlocomotor sequences
A4–4 consistently and confidently perform nonlocomotor skills by using elements of body and space awareness, effort and relationships to a variety of stimuli to improve personal performance	A5–4 consistently and confidently perform nonlocomotor skills by using elements of body and space awareness, effort and relationships to a variety of stimuli to improve personal performance	A6–4 consistently and confidently perform nonlocomotor skills by using elements of body and space awareness, effort and relationships, to improve personal performance
Basic Skills—Manipulative: receiving; e.g., catching, collecting: retaining; e.g., dribbling, carrying, bouncing, trapping: sending; e.g., throwing, kicking, striking		
A4–5 select, perform and refine ways to receive, retain and send an object with control	A5–5 select, perform and refine more challenging ways to receive, retain and send an object with control	A6–5 demonstrate ways to receive, retain and send an object with increasing accuracy
A4–6 consistently and confidently perform manipulative skills by using elements of body and space awareness, effort and relationship	A5–6 consistently and confidently perform manipulative skills by using elements of body and space awareness, effort and relationship	A6–6 consistently and confidently perform manipulative skills by using elements of body and space awareness, effort and relationship

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GENERAL OUTCOME A

Students will acquire skills through a variety of developmentally appropriate movement activities; dance, games, types of gymnastics, individual activities and activities in an alternative environment; e.g., aquatics and outdoor pursuits.

Grade 7 [A7–]	Grade 8 [A8–]	Grade 9 [A9–]

Students will:

Basic Skills—Locomotor; e.g., walking, running, hopping, jumping, leaping, rolling, skipping, galloping, climbing, sliding, propulsion through water

A7–1 demonstrate ways to improve and refine the functional and expressive quality of locomotor skills to improve personal performance	A8–1 select, combine and perform specific locomotor skills in a variety of activities to improve personal performance	A9–1 apply and refine locomotor skills and concepts to a variety of activities with increased control to improve personal performance
A7–2 demonstrate locomotor skills by using elements of body and space awareness, effort and relationships to improve personal performance	A8–2 select, combine and perform locomotor skills by using elements of body and space awareness, effort and relationships to improve personal performance	A9–2 apply and refine locomotor skills by using elements of body and space awareness, effort and relationships to improve personal performance

Basic Skills—Nonlocomotor; e.g., turning, twisting, swinging, balancing, bending, landing, stretching, curling, hanging

A7–3 demonstrate ways to improve and refine the functional and expressive quality of nonlocomotor skills to improve personal performance	A8–3 select, combine and perform specific nonlocomotor skills in a variety of activities to improve personal performance	A9–3 apply and refine nonlocomotor skills and concepts to a variety of activities with increased control to improve personal performance
A7–4 demonstrate nonlocomotor skills by using elements of body and space awareness, effort and relationships, to improve personal performance	A8–4 select, combine and perform nonlocomotor skills by using elements of body and space awareness, effort and relationships, to improve personal performance	A9–4 apply and refine nonlocomotor skills by using elements of body and space awareness, effort and relationships, to improve personal performance

Basic Skills—Manipulative: receiving; e.g., catching, collecting: retaining; e.g., dribbling, carrying, bouncing, trapping: sending; e.g., throwing, kicking, striking

A7–5 demonstrate ways to receive, retain and send an object with varying speeds and accuracy in skills specific to an activity	A8–5 demonstrate ways to receive, retain and send an object with varying speeds, accuracy and distance in skills specific to an activity	A9–5 apply and refine ways to receive, retain and send an object with increased speed, accuracy and distance in skills specific to an activity
A7–6 demonstrate manipulative skills by using elements of space awareness, effort and relationships, with and without objects, to improve performance	A8–6 select, combine and perform manipulative skills by using elements of space awareness, effort and relationships, with and without objects, to improve performance	A9–6 apply and refine manipulative skills by using elements of space awareness, effort and relationships, with and without objects, to improve performance

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GENERAL OUTCOME A

Students will acquire skills through a variety of developmentally appropriate movement activities; dance, games, types of gymnastics, individual activities and activities in an alternative environment; e.g., aquatics and outdoor pursuits.

Physical Education 10 [A10–]	Physical Education 20 [A20–]	Physical Education 30 [A30–]
Students will:		
Basic Skills—Locomotor; e.g., walking, running, hopping, jumping, leaping, rolling, skipping, galloping, climbing, sliding, propulsion through water		
A10–1 apply and refine locomotor skills and concepts—effort, space and relationships—to perform and create a variety of activities to improve personal performance	A20–1 analyze, evaluate and modify performance of locomotor skills and concepts—effort, space and relationships—to perform and create a variety of activities to improve personal performance	A30–1 analyze, evaluate and adapt performance of locomotor skills and concepts—effort, space and relationships—to perform and create a variety of activities to improve personal performance
A10–2 N/A	A20–2 N/A	A30–2 N/A
Basic Skills—Nonlocomotor; e.g., turning, twisting, swinging, balancing, bending, landing, stretching, curling, hanging		
A10–3 apply and refine nonlocomotor skills and concepts—effort, space and relationships—to perform and create a variety of activities to improve personal performance	A20–3 analyze, evaluate and modify performance of nonlocomotor skills and concepts—effort, space and relationships—to perform and create a variety of activities to improve personal performance	A30–3 analyze, evaluate and adapt performance of nonlocomotor skills and concepts—effort, space and relationships—to perform and create a variety of activities to improve personal performance
A10–4 N/A	A20–4 N/A	A30–4 N/A
Basic Skills—Manipulative: receiving; e.g., catching, collecting: retaining; e.g., dribbling, carrying, bouncing, trapping: sending; e.g., throwing, kicking, striking		
A10–5 apply and refine manipulative skills and concepts—effort, space and relationships—to perform and create a variety of activities to improve personal performance	A20–5 analyze, evaluate and modify performance of manipulative skills and concepts—effort, space and relationships—to perform and create a variety of activities to improve personal performance	A30–5 analyze, evaluate and adapt performance of manipulative skills and concepts—effort, space and relationships—to perform and create a variety of activities to improve personal performance
A10–6 N/A	A20–6 N/A	A30–6 N/A

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Activity

GENERAL OUTCOME A

Students will acquire skills through a variety of developmentally appropriate movement activities; dance, games, types of gymnastics, individual activities and activities in an alternative environment; e.g., aquatics and outdoor pursuits.

Kindergarten [AK–]	Grade 1 [A1–]	Grade 2 [A2–]	Grade 3 [A3–]
Students will:			
Application of Basic Skills in an Alternative Environment			
AK–7 experience the basic skills in a variety of environments; e.g., playground	A1–7 demonstrate the basic skills in a variety of environments; e.g., tarmac activities	A2–7 select and perform basic skills in a variety of environments and using various equipment; e.g., obstacle course	A3–7 select and perform basic skills in a variety of environments and using various equipment; e.g., snowshoeing
Application of Basic Skills in Dance			
AK–8 experience movement to respond to a variety of stimuli; e.g., music	A1–8 perform simple movements by using elements of effort and space to respond to a variety of stimuli; e.g., music	A2–8 demonstrate basic dance steps and movement; e.g., creative, folk, line, sequence and novelty, alone and with others, by using elements of effort, space and relationship	A3–8 select and perform basic dance steps and patterns; e.g., creative, folk, line, sequence and novelty, alone and with others
AK–9 experience body awareness when performing dance activities	A1–9 demonstrate body awareness when performing dance activities	A2–9 perform simple movement sequences by using elements of body and space awareness and relationships, alone and with others	A3–9 select and perform simple movement sequences by using elements of body and space awareness and relationships, alone and with others
Application of Basic Skills in Games			
AK–10 demonstrate body and space awareness when performing space awareness games	A1–10 demonstrate body and space awareness when performing space awareness games	A2–10 create and play body and space awareness games	A3–10 perform and play lead-up games and demonstrate elements of space awareness, effort and relationship
AK–11 demonstrate an understanding of basic rules and fair play	A1–11 demonstrate an understanding of basic rules and fair play for simple games	A2–11 apply basic rules and fair play while playing and learning the strategies of lead-up games	A3–11 demonstrate the ability to work together with a teammate/team to achieve a common activity goal while playing and learning the basic strategies of lead-up games

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GENERAL OUTCOME A

Students will acquire skills through a variety of developmentally appropriate movement activities; dance, games, types of gymnastics, individual activities and activities in an alternative environment; e.g., aquatics and outdoor pursuits.

Grade 4 [A4–]	Grade 5 [A5–]	Grade 6 [A6–]
Students will:		
Application of Basic Skills in an Alternative Environment		
A4–7 select, perform and refine basic skills in a variety of environments and using various equipment; e.g., water safety, skating, swimming	A5–7 select, perform and refine more challenging basic skills in a variety of environments and using various equipment; e.g., cross-country skiing, orienteering	A6–7 select, perform and refine more challenging basic skills in a variety of environments and using various equipment; e.g., downhill skiing, hiking
Application of Basic Skills in Dance		
A4–8 select, perform and refine basic dance steps and patterns; e.g., creative, folk, line, sequence and novelty, alone and with others	A5–8 demonstrate a variety of dances; e.g., creative, folk, line, sequence and novelty, alone and with others	A6–8 demonstrate and refine a variety of dances; e.g., creative, folk, line, square and novelty, alone and with others
A4–9 demonstrate a creative process to develop dance sequences alone and with others	A5–9 demonstrate a creative process to develop dance sequences alone and with others; and, demonstrate movement sequences in response to a variety of musical, verbal and visual stimuli	A6–9 demonstrate a creative process to develop dance sequences alone and with others; and, demonstrate movement sequences in response to a variety of musical, verbal and visual stimuli
Application of Basic Skills in Games		
A4–10 demonstrate critical thinking and problem-solving skills to modify games and achieve activity outcomes	A5–10 apply critical thinking and problem-solving skills to create competitive and cooperative modified games that involve everyone	A6–10 demonstrate sport specific skills to create competitive and cooperative modified games that involve everyone
A4–11 demonstrate strategies and tactics that coordinate effort with others; e.g., team, in order to achieve a common activity goal in lead-up games	A5–11 demonstrate basic strategies and tactics that coordinate effort with others; e.g., team, in order to achieve a common activity goal in lead-up games	A6–11 demonstrate basic strategies and tactics that coordinate effort with others; e.g., team, in order to achieve a common activity goal and moving toward more formal games

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GENERAL OUTCOME A

Students will acquire skills through a variety of developmentally appropriate movement activities; dance, games, types of gymnastics, individual activities and activities in an alternative environment; e.g., aquatics and outdoor pursuits.

Grade 7 [A7–]	Grade 8 [A8–]	Grade 9 [A9–]
Students will:		
Application of Basic Skills in an Alternative Environment		
A7–7 demonstrate activity-specific skills in a variety of environments and using various equipment; e.g., orienteering	A8–7 apply activity-specific skills in a variety of environments and using various equipment; e.g., cross-country skiing, skating	A9–7 apply and refine activity-specific skills in a variety of environments; e.g., hiking, wall climbing
Application of Basic Skills in Dance		
A7–8 refine and present a variety of dance sequences; e.g., folk, square, social and novelty, alone and with others	A8–8 select, refine and present a variety of dance sequences; e.g., jazz, square, social and novelty, alone and with others	A9–8 create, refine and present a variety of dance sequences; e.g., jazz, square, social and novelty, alone and with others
A7–9 choreograph and perform dance sequences, using the elements of movement and basic dance steps and patterns	A8–9 choreograph and perform dance sequences, using the elements of movement and basic dance steps and patterns	A9–9 choreograph and perform dance sequences, using the elements of movement and basic dance steps and patterns
Application of Basic Skills in Games		
A7–10 demonstrate activity-specific basic skills in a variety of games	A8–10 select, combine and perform activity-specific basic skills in a variety of games	A9–10 apply and refine activity-specific basic skills in a variety of games
A7–11 demonstrate more challenging strategies and tactics that coordinate effort with others; e.g., team/fair play, in order to achieve a common goal activity	A8–11 be able to identify and evaluate specific strategies and tactics that coordinate effort with others; e.g., team/fair play, in order to achieve a common activity goal	A9–11 create and plan activities that emphasize specific strategies and tactics that coordinate effort with others; e.g., team/fair play, in order to achieve a common activity goal

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GENERAL OUTCOME A

Students will acquire skills through a variety of developmentally appropriate movement activities; dance, games, types of gymnastics, individual activities and activities in an alternative environment; e.g., aquatics and outdoor pursuits.

Physical Education 10 [A10–]	Physical Education 20 [A20–]	Physical Education 30 [A30–]
Students will:		
Application of Basic Skills in an Alternative Environment		
A10–7 adapt and improve activity-specific skills in a variety of environments; e.g., camping, canoeing, survival skills	A20–7 develop and combine more challenging activity-specific skills in a variety of environments; e.g., snorkelling progressing to scuba diving	A30–7 recommend and relate a choice of activity-specific skills in an alternative environment to meet activity goal; e.g., river canoeing versus flat water canoeing
Application of Basic Skills in Dance		
A10–8 apply the principles of dance to improve performance	A20–8 develop and perform more complex dances	A30–8 develop, refine and perform more complex dances
A10–9 choreograph and perform dances for self and others; e.g., jazz, social and novelty	A20–9 choreograph, perform and interpret dance for self and others; e.g., jazz, social and novelty	A30–9 choreograph, perform and critique dance for self and others; e.g., jazz, social and novelty
Application of Basic Skills in Games		
A10–10 adapt and improve activity-specific skills in a variety of games	A20–10 develop and refine activity-specific skills in a variety of games	A30–10 develop and further refine activity-specific skills in a variety of games
A10–11 select, plan and create games that incorporate simple and more challenging strategies and tactics	A20–11 apply the relationship among skills, rules and strategies in the creation and playing of games	A30–11 apply and analyze the relationship among skills, rules and strategies in the creation and playing of games

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Activity

GENERAL OUTCOME A

Students will acquire skills through a variety of developmentally appropriate movement activities; dance, games, types of gymnastics, individual activities and activities in an alternative environment; e.g., aquatics and outdoor pursuits.

Kindergarten [AK–]	Grade 1 [A1–]	Grade 2 [A2–]	Grade 3 [A3–]

Students will:

Application of Basic Skills in Types of Gymnastics

AK–12 experience educational gymnastics; e.g., exploring the use of different body parts, types of effort, space and relationships	A1–12 demonstrate the basic skills in educational gymnastics; e.g., use of different body parts, types of effort, space and relationships	A2–12 select and perform the basic skills in educational gymnastics; e.g., use of different body parts, types of effort, space and relationships, to develop a sequence	A3–12 select and perform the basic skills in educational gymnastics; e.g., use of different body parts, types of effort, space and relationships to develop a sequence

Application of Basic Skills in Individual Activities

AK–13 experience the basic skills of running, jumping, throwing in a variety of environments; e.g., field	A1–13 demonstrate the basic skills of running, jumping, throwing in a variety of environments and using various equipment; e.g., skipping ropes	A2–13 select and perform basic skills of running, jumping, throwing in a variety of environments and using various equipment; e.g., catching	A3–13 manipulate a variety of small objects while performing basic skills to demonstrate personal control; e.g., juggling

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GENERAL OUTCOME A

Students will acquire skills through a variety of developmentally appropriate movement activities; dance, games, types of gymnastics, individual activities and activities in an alternative environment; e.g., aquatics and outdoor pursuits.

Grade 4 [A4–]	Grade 5 [A5–]	Grade 6 [A6–]
Students will:		
Application of Basic Skills in Types of Gymnastics		
A4–12 select, perform and refine the basic skills in educational gymnastics, e.g., use of different body parts, types of effort, space and relationships to develop a sequence	A5–12 apply and refine basic skills and elements of body and space awareness, effort and relationships together to form a variety of more challenging gymnastic sequences individually, with a partner, or in a group; e.g., educational, rhythmic gymnastics	A6–12 select, perform and refine basic skills and elements of body and space awareness, effort and relationships together to form a variety of more challenging gymnastic sequences individually, with a partner, or in a group; e.g., educational, rhythmic gymnastics
Application of Basic Skills in Individual Activities		
A4–13 select, perform and refine basic skills in individual activities; e.g., cross country running	A5–13 select, perform and refine more challenging basic skills in individual activities; e.g., hacky sack	A6–13 demonstrate activity specific skills in a variety of individual activities; e.g., track and field/ athletics

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GENERAL OUTCOME A

Students will acquire skills through a variety of developmentally appropriate movement activities; dance, games, types of gymnastics, individual activities and activities in an alternative environment; e.g., aquatics and outdoor pursuits.

Grade 7 [A7–]	Grade 8 [A8–]	Grade 9 [A9–]

Students will:

Application of Basic Skills in Types of Gymnastics

A7–12 demonstrate ways to improve and refine the functional and expressive qualities of movements that combine basic skills in a variety of gymnastic experiences individually, with a partner, or in a group; e.g., educational, rhythmic and artistic	A8–12 select and perform ways to improve the functional and expressive qualities of movements, that combine basic skills in a variety of gymnastic experiences individually, with a partner, or in a group; e.g., educational, rhythmic and artistic	A9–12 apply and refine ways to improve the functional and expressive qualities of movements, that combine basic skills in a variety of gymnastic experiences individually, with a partner, or in a group; e.g., educational, rhythmic and artistic

Application of Basic Skills in Individual Activities

A7–13 demonstrate activity-specific skills in a variety of individual pursuits; e.g., power walk	A8–13 select, perform and refine activity-specific skills in a variety of individual pursuits; e.g. wrestling	A9–13 apply and refine activity-specific skills in a variety of individual pursuits; e.g., fitness activities

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GENERAL OUTCOME A

Students will acquire skills through a variety of developmentally appropriate movement activities; dance, games, types of gymnastics, individual activities and activities in an alternative environment; e.g., aquatics and outdoor pursuits.

Physical Education 10	Physical Education 20	Physical Education 30
Students will:		
Application of Basic Skills in Types of Gymnastics		
A10–12 apply the basic skills in combination with each other with personal proficiency in a variety of gymnastic experiences individually, with a partner, or in a group; e.g., educational, rhythmic and artistic	A20–12 apply a combination of the basic skills in a variety of gymnastic and movement experiences individually, with a partner, or in a group	A30–12 refine and transfer the basic skills in a variety of gymnastic and movement experiences individually, with a partner, or in a group
Application of Basic Skills in Individual Activities		
A10–13 adapt and improve activity-specific skills in a variety of individual pursuits; e.g., resistance training, aerobics	A20–13 develop and combine more challenging activity-specific skills in a variety of individual pursuits; e.g., self-defense	A30–13 recommend a choice of activity-specific skills in pursuing lifelong individual activities; e.g., cycling

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GENERAL OUTCOME B

Students will understand, experience and appreciate the health benefits that result from physical activity.

Kindergarten [BK–]	Grade 1 [B1–]	Grade 2 [B2–]	Grade 3 [B3–]
Students will:			
Functional Fitness			
BK–1 recognize appropriate nutritional habits	B1–1 identify healthy nutritional habits	B2–1 recognize that "energy" is required for muscle movement	B3–1 describe the concept of energy required for muscles
BK–2 recognize improvement in physical abilities	B1–2 demonstrate ways to improve personal growth in physical abilities	B2–2 describe ways to improve personal growth in physical abilities	B3–2 demonstrate and describe ways to improve personal growth in physical abilities
BK–3 experience cardio-respiratory activities	B1–3 experience and improve continued frequency of involvement in cardio-respiratory activities	B2–3 experience movement involving the components of health-related fitness; e.g., flexibility, endurance, strength, cardio-respiratory activities	B3–3 experience movement involving the components of health-related fitness; e.g., flexibility, endurance, strength, cardio-respiratory activities
Body Image			
BK–4 recognize personal abilities while participating in physical activity	B1–4 recognize personal abilities while participating in physical activity	B2–4 identify personal physical attributes that contribute to physical activity	B3–4 describe personal physical attributes that contribute to physical activity
BK–5 N/A	B1–5 N/A	B2–5 N/A	B3–5 N/A
Well-being			
BK–6 experience how physical activity makes one feel	B1–6 describe how physical activity makes you feel	B2–6 describe how the body benefits from physical activity	B3–6 describe the benefits of physical activity to the body
BK–7 experience the changes that take place in the body during physical activity	B1–7 recognize the changes that take place in the body during physical activity	B2–7 identify changes that take place in the body during physical activity	B3–7 describe the changes that take place in the body during physical activity
BK–8 understand the connections between physical activity and emotional well-being; e.g., feels good	B1–8 understand the connections between physical activity and emotional well-being; e.g., feels good	B2–8 understand the connections between physical activity and emotional well-being; e.g., feels good	B3–8 understand the connections between physical activity and emotional well-being; e.g., feels good

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GENERAL OUTCOME B

Students will understand, experience and appreciate the health benefits that result from physical activity.

Grade 4 [B4–]	Grade 5 [B5–]	Grade 6 [B6–]
Students will:		
Functional Fitness		
B4–1 identify the nutritional needs related to physical activity	B5–1 explain the relationship between nutritional habits and physical activity	B6–1 explain the relationship between nutritional habits and performance in physical activity
B4–2 demonstrate and describe ways to achieve a personal functional level of physical fitness through participation in physical activity	B5–2 demonstrate and select ways to achieve a personal functional level of physical fitness through participation in physical activity	B6–2 demonstrate and select ways to achieve a personal functional level of physical fitness through participation in physical activity
B4–3 experience movement, involving components of fitness	B5–3 identify and explain the importance of the components of fitness to health and well-being; e.g., strength, endurance, flexibility, cardio-respiratory activities	B6–3 explain the components of fitness; e.g., strength, endurance, flexibility, cardio-respiratory activities, and relate these to personal fitness level
Body Image		
B4–4 recognize and personally acknowledge individual and other attributes that contribute to physical activity	B5–4 acknowledge and accept individual differences in body shapes and how different body types contribute to positive involvement in physical activities	B6–4 acknowledge and accept individual differences in body shapes and how different body types contribute to positive involvement in physical activities
B4–5 N/A	B5–5 N/A	B6–5 N/A
Well-being		
B4–6 describe positive benefits gained from physical activity; e.g., physically, emotionally, socially	B5–6 infer positive benefits gained from specific physical activities	B6–6 identify and plan for personal positive benefits from specific physical activity
B4–7 demonstrate changes that take place in the body during physical activity	B5–7 describe how physical activity influences physical fitness and the body systems	B6–7 describe and chart individual fitness changes as a result of engaging in physical activity
B4–8 understand the connection between physical activity, stress management and relaxation	B5–8 understand the connection between physical activity, stress management and relaxation	B6–8 understand the connection between physical activity, stress management and relaxation

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GENERAL OUTCOME B

Students will understand, experience and appreciate the health benefits that result from physical activity.

Grade 7 [B7–]	Grade 8 [B8–]	Grade 9 [B9–]
Students will:		
Functional Fitness		
B7–1 analyze personal nutritional habits and how they relate to performance in physical activity	B8–1 monitor and analyze a personal nutrition plan that affects physical performance	B9–1 design, monitor and personally analyze nutrition programs that will affect physical performance
B7–2 demonstrate and evaluate ways to achieve a personal functional level of physical fitness	B8–2 demonstrate and monitor ways to achieve a personal functional level of physical fitness	B9–2 demonstrate, monitor and analyze ways to achieve a personal functional level of physical fitness
B7–3 explain the components of fitness; e.g., strength, endurance, flexibility, cardio-respiratory activity; analyze individual abilities and formulate an individual plan for growth	B8–3 explain fitness components and principles of training, and formulate individual plans for personal physical fitness	B9–3 design and implement a personal fitness and activity plan, using the principles of training: frequency intensity, duration
Body Image		
B7–4 identify different body types and how all types can contribute to, or participate positively in, physical activity	B8–4 acknowledge the perceptions that occur as a result of media influence on body types in relation to physically active images	B9–4 acknowledge and analyze the media and peer influences on body image
B7–5 discuss performance-enhancing substances as a part of the negative effect on physical activity	B8–5 discuss performance-enhancing substances and how they can affect body type in relation to physical activity	B9–5 discuss the effects of performance-enhancing substances on body type and body image as a part of physical activity
Well-being		
B7–6 identify and explain the effects of exercise on the body systems before, during and after exercise	B8–6 analyze the personal effects of exercise on the body systems before, during and after exercise	B9–6 analyze and explain the effects that nutrition, fitness and physical activity have on body systems before, during and after exercise
B7–7 interpret personal fitness changes as a result of physical activity	B8–7 monitor, analyze and assess fitness changes as a result of physical activity	B9–7 monitor, analyze and assess fitness changes as a result of physical activity
B7–8 understand the connection between physical activity, stress management and relaxation	B8–8 describe and perform appropriate physical activities for personal stress management and relaxation	B9–8 select and perform appropriate physical activities for personal stress management and relaxation

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GENERAL OUTCOME B

Students will understand, experience and appreciate the health benefits that result from physical activity.

Physical Education 10 [B10–]	Physical Education 20 [B20–]	Physical Education 30 [B30–]
Students will:		
Functional Fitness		
B10–1 design, analyze and modify nutrition programs that will positively affect performance in physical activity	B20–1 compare and contrast different nutrition programs that will positively affect performance in physical activity; e.g., pre- and post-competition	B30–1 design and justify nutrition plans that will positively affect performance for a variety of physical activities; e.g., triathlon training versus fitness maintenance
B10–2 demonstrate, monitor, analyze and reflect upon ways to achieve a personal functional level of physical fitness	B20–2 add to the variety of ways for achieving a personal functional fitness level	B30–2 appraise different activities and their effects on a personal functional level of fitness
B10–3 plan, assess and maintain personal fitness, using the principles of training: frequency, intensity, duration	B20–3 plan, assess and maintain personal fitness, using the principles of training: progression, overload and specificity	B30–3 evaluate, monitor and adapt fitness plans for self and others, applying the principles of training
Body Image		
B10–4 acknowledge and analyze the media and peer influences on body image	B20–4 interpret the impact of the media and peer influences on body image	B30–4 interpret and evaluate the impact of the media and peer influences on body image
B10–5 discuss the effects of performance-enhancing substances on body type and body image as a part of physical activity	B20–5 discuss the effects of performance-enhancing substances on body type and body image as a part of physical activity	B30–5 discuss the effects of performance-enhancing substances on body type and body image as a part of physical activity
Well-being		
B10–6 clarify the positive benefits that occur as a result of participation in physical activity	B20–6 analyze the positive benefits gained from physical activity	B30–6 predict the positive benefits gained from physical activity
B10–7 understand the consequences and risks associated with an inactive lifestyle	B20–7 understand the consequences and risks associated with an inactive lifestyle	B30–7 understand the consequences and risks associated with an inactive lifestyle
B10–8 select and perform appropriate physical activities for personal stress management and relaxation	B20–8 design and implement a plan for personal stress management	B30–8 monitor and evaluate the plan for personal stress management

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GENERAL OUTCOME C

Students will interact positively with others.

Kindergarten [CK–]	Grade 1 [C1–]	Grade 2 [C2–]	Grade 3 [C3–]
Students will:			
Communication			
CK–1 begin to develop respectful communication skills appropriate to context	C1–1 develop and demonstrate respectful communication skills appropriate to context	C2–1 identify and demonstrate respectful communication skills appropriate to context	C3–1 describe and demonstrate respectful communication skills appropriate to context
CK–2 N/A	C1–2 N/A	C2–2 N/A	C3–2 N/A
Fair Play			
CK–3 identify and demonstrate etiquette and fair play	C1–3 identify and demonstrate etiquette and fair play	C2–3 identify and demonstrate etiquette and fair play	C3–3 identify and demonstrate etiquette and fair play
Leadership			
CK–4 experience different roles in a variety of physical activities	C1–4 identify different roles in a variety of physical activities	C2–4 accept responsibility for assigned roles while participating in physical activity	C3–4 accept responsibility for assigned roles while participating in physical activity
Teamwork			
CK–5 display a willingness to play alongside others	C1–5 display a willingness to play cooperatively with others in large and small groups	C2–5 display a willingness to play cooperatively with others of various abilities, in large or small groups	C3–5 display a willingness to share ideas, space and equipment when participating cooperatively with others
CK–6 N/A	C1–6 N/A	C2–6 N/A	C3–6 N/A

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GENERAL OUTCOME C

Students will interact positively with others.

Grade 4 [C4–]	Grade 5 [C5–]	Grade 6 [C6–]
Students will:		
Communication		
C4–1 articulate and demonstrate respectful communication skills appropriate to context	C5–1 identify and demonstrate respectful communication skills appropriate to cooperative participation in physical activity	C6–1 identify and demonstrate respectful communication skills appropriate to various physical activities and that reflect feelings, ideas and experiences
C4–2 N/A	C5–2 N/A	C6–2 N/A
Fair Play		
C4–3 identify and demonstrate etiquette and fair play	C5–3 demonstrate etiquette and fair play	C6–3 demonstrate etiquette and fair play
Leadership		
C4–4 select and demonstrate responsibility for assigned roles while participating in physical activity; and, accept ideas from others that relate to changing/adapting, movement experiences	C5–4 select and demonstrate responsibility for various roles while participating in physical education; and, accept ideas from others that relate to changing/adapting, movement experiences	C6–4 identify and then take responsibility for various roles while participating in physical activity; and, identify leadership and followership skills used while participating in physical education
Teamwork		
C4–5 participate cooperatively in group activities	C5–5 identify and demonstrate practices that contribute to teamwork	C6–5 describe and demonstrate practices that contribute to teamwork
C4–6 identify and demonstrate positive behaviours that show respect for self and others	C5–6 identify and demonstrate positive behaviours that show respect for self and others	C6–6 identify and demonstrate positive behaviours that show respect for self and others

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GENERAL OUTCOME C

Students will interact positively with others.

Grade 7 [C7–]	Grade 8 [C8–]	Grade 9 [C9–]
Students will:		
Communication		
C7–1 communicate thoughts and feelings in an appropriate respectful manner as they relate to participation in physical activity	C8–1 communicate thoughts and feelings in an appropriate respectful manner as they relate to participation in physical activity	C9–1 communicate thoughts and feelings in an appropriate respectful manner as they relate to participation in physical activity
C7–2 identify positive active living role models	C8–2 discuss positive active living role models	C9–2 identify and discuss the positive behaviours that are demonstrated by active living role models
Fair Play		
C7–3 demonstrate etiquette and fair play	C8–3 demonstrate etiquette and fair play	C9–3 demonstrate etiquette and fair play
Leadership		
C7–4 identify and then take responsibility for various roles while participating in physical activity; and, identify the leadership and followership skills used while participating in physical education	C8–4 describe, apply and practise leadership and followership skills related to physical activity	C9–4 describe, apply, monitor and practise leadership and followership skills related to physical activity
Teamwork		
C7–5 select and apply practices that contribute to teamwork	C8–5 recommend practices that contribute to teamwork	C9–5 develop practices that contribute to teamwork
C7–6 identify and demonstrate positive behaviours that show respect for self and others	C8–6 identify and demonstrate positive behaviours that show respect for self and others	C9–6 identify and demonstrate positive behaviours that show respect for self and others

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GENERAL OUTCOME C

Students will interact positively with others.

Physical Education 10 [C10–]	Physical Education 20 [C20–]	Physical Education 30 [C30–]
Students will:		
Communication		
C10–1 communicate thoughts and feelings in an appropriate respectful manner as they relate to participation in physical activity	C20–1 communicate thoughts and feelings in an appropriate respectful manner as they relate to participation in physical activity	C30–1 communicate thoughts and feelings in an appropriate respectful manner as they relate to participation in physical activity
C10–2 discuss issues related to positive athletic/active living role models	C20–2 demonstrate an understanding of behaviour appropriate to positive active living role modelling	C30–2 discuss issues related to active living
Fair Play		
C10–3 demonstrate etiquette and fair play	C20–3 demonstrate etiquette and fair play	C30–3 demonstrate etiquette and fair play
Leadership		
C10–4 describe, apply, monitor and assess leadership and followership skills related to physical activity	C20–4 apply, monitor and assess leadership and followership skills related to physical activities, and demonstrate an understanding of leadership skills related to implementing physical activity events or programs in the school and/or community	C30–4 apply, monitor and assess leadership and followership skills related to physical activities, and demonstrate an understanding of leadership skills related to implementing physical activity events or programs in the school and/or community
Teamwork		
C10–5 develop and apply practices that contribute to teamwork	C20–5 develop and apply practices that contribute to teamwork	C30–5 develop and apply practices that contribute to teamwork
C10–6 identify and demonstrate positive behaviours that show respect for self and others	C20–6 identify and demonstrate positive behaviours that show respect for self and others	C30–6 identify and demonstrate positive behaviours that show respect for self and others

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Do it Daily ... for Life!

GENERAL OUTCOME D

Students will assume responsibility to lead an active way of life.

Kindergarten [DK–]	Grade 1 [D1–]	Grade 2 [D2–]	Grade 3 [D3–]
Students will:			
Effort			
DK–1 show a willingness to participate regularly in short periods of activity with frequent rest intervals	D1–1 show a willingness to participate regularly in short periods of activity with frequent rest intervals	D2–1 express a willingness to participate regularly in physical education class	D3–1 express a willingness to participate regularly in physical education class
DK–2 participate with effort in physical activities	D1–2 demonstrate effort while participating in various activities	D2–2 identify personal factors that encourage movement	D3–2 describe factors that encourage movement and a personal feeling about movement
Safety			
DK–3 show a willingness to listen to directions and simple explanations	D1–3 show a willingness to listen to directions and simple explanations	D2–3 demonstrate the ability to listen to directions, follow rules and routines, and stay on-task while participating in physical activity	D3–3 demonstrate the ability to listen to directions, follow rules and routines, and stay on task while participating in physical activity
DK–4 participate in safe warm-up and cool-down activities	D1–4 participate in safe warm-up and cool-down activities	D2–4 demonstrate and participate in safe warm-up and cool-down activities	D3–4 demonstrate and participate in safe warm-up and cool-down activities
DK–5 experience moving safely and sensitively through all environments; e.g., movement activities	D1–5 move safely and sensitively through all environments; e.g., space awareness activities	D2–5 demonstrate moving safely and sensitively in various environments; e.g., modified games	D3–5 tell about safe movement experiences in various environments; e.g., gymnastic equipment

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GENERAL OUTCOME D

Students will assume responsibility to lead an active way of life.

Grade 4 [D4–1]	Grade 5 [D5–]	Grade 6 [D6–]
Students will:		
Effort		
D4–1 demonstrate a willingness to participate regularly in physical education class	D5–1 participate regularly in physical activity to develop components of health-related fitness and movement skills	D6–1 demonstrate enjoyment of participation through extended effort in physical activity
D4–2 demonstrate factors that encourage movement	D5–2 demonstrate factors that encourage movement	D6–2 identify and demonstrate strategies that encourage participation and continued motivation
Safety		
D4–3 follow rules, routines and procedures for safety in a variety of activities	D5–3 identify and follow rules, routines and procedures for safety in a variety of activities	D6–3 identify, describe and follow the rules, routines and procedures for safety in a variety of activities from all movement dimensions
D4–4 participate in, and identify the benefits of, safe warm-up and cool-down activities	D5–4 participate in, and identify the benefits of, safe warm-up and cool-down activities	D6–4 participate in, and demonstrate the benefits of, safe warm-up and cool-down activities
D4–5 describe how to move safely in various environments; e.g., skating rink	D5–5 identify safe practices that promote an active, healthy lifestyle; e.g., water safety	D6–5 select simple, safe practices that promote an active, healthy lifestyle; e.g., rules of the road for cycling, inline skating

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GENERAL OUTCOME D

Students will assume responsibility to lead an active way of life.

Grade 7 [D7–]	Grade 8 [D8–]	Grade 9 [D9–]
Students will:		
Effort		
D7–1 participate regularly in, and identify the benefits of, an active lifestyle	D8–1 participate regularly in, and identify and describe the benefits of, an active lifestyle	D9–1 participate regularly in, and realize the benefits of, an active lifestyle
D7–2 identify and demonstrate strategies that encourage participation and continued motivation	D8–2 develop a personal plan that encourages participation and continued motivation	D9–2 develop a personal plan that encourages participation and continued motivation
Safety		
D7–3 identify, describe and follow the rules, routines and procedures for safety in a variety of activities in all dimensions	D8–3 select and apply rules, routines and procedures for safety in a variety of activities	D9–3 select and apply rules, routines and procedures for safety in a variety of activities from all movement dimensions
D7–4 explain the benefits of, and demonstrate safe, warm-up and cool-down activities	D8–4 design and perform warm-up and cool-down activities	D9–4 analyze, design and perform warm-up and cool-down activities
D7–5 recommend safe movement experiences that promote an active, healthy lifestyle; e.g., protective equipment for in-line skating, ball hockey	D8–5 appraise or judge movement experiences for safety that promote an active, healthy lifestyle; e.g., safe use of equipment	D9–5 design safe movement experiences that promote an active, healthy lifestyle; e.g., student-created games

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GENERAL OUTCOME D

Students will assume responsibility to lead an active way of life.

Physical Education 10 [D10–]	Physical Education 20 [D20–]	Physical Education 30 D30–]
Students will:		
Effort		
D10–1 demonstrate a commitment to an active lifestyle through participation in and out of class	D20–1 model an active lifestyle	D30–1 model an active lifestyle
D10–2 develop a personal plan that is self-motivating and encourages ongoing participation	D20–2 refine a personal plan that is self-motivating and encourages ongoing participation	D30–2 recommend future changes and modifications to one's personal plan to maintain a healthy, active lifestyle
Safety		
D10–3 select and apply rules, routines and procedures of safety in a variety of activities	D20–3 develop and apply safety standards and rules in a variety of activities	D30–3 develop and apply safety standards and rules in a variety of activities
D10–4 analyze, design and assess warm-up and cool-down activities	D20–4 analyze, design and assess warm-up and cool-down activities	D30–4 analyze, design and assess warm-up and cool-down activities
D10–5 define and understand first aid principles and survival skills as they relate to physical activity; e.g., aquatics; and, demonstrate responsibility for actions taken to address immediate and potential hazards that might affect self and others	D20–5 demonstrate first aid principles and survival skills as they relate to physical activity; e.g., camping; and, identify and analyze potential hazards that might affect self and others	D30–5 apply the use of first aid principles and survival skills as they relate to physical activity; e.g., athletic training; and, recommend actions that will minimize potential hazards to self and others

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GENERAL OUTCOME D

Students will assume responsibility to lead an active way of life.

Kindergarten [DK–]	Grade 1 [D1–]	Grade 2 [D2–]	Grade 3 [D3–]
Students will:			
Goal Setting/Personal Challenge			
DK–6 participate in a class activity with a group goal; e.g., walk a predetermined distance	D1–6 participate in a class activity with a group goal; e.g., walk a predetermined distance	D2–6 practise setting a short-term goal related to positive effort to participate in a physical activity	D3–6 set and achieve a short-term goal to increase effort and participation in one area of physical activity
DK–7 make choices to be involved in a variety of movement experiences	D1–7 try a challenging movement experience based on personal abilities	D2–7 identify ways to change an activity to make it a challenge based on personal abilities	D3–7 identify ways to change an activity to make it a challenge based on personal abilities
Active Living in the Community			
DK–8 describe appropriate places for children to play	D1–8 identify and experience safe places to play in the community	D2–8 identify types of physical activities people choose within the community	D3–8 describe types of physical activities people choose within the community and reasons for their choices
DK–9 make choices to be active	D1–9 make decisions to be active	D2–9 make appropriate movement choices considering personal space, safety, ability and the surrounding environment	D3–9 make appropriate movement choices with consideration for safety of personal space, ability and surrounding environment

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GENERAL OUTCOME D

Students will assume responsibility to lead an active way of life.

Grade 4 [D4–1]	Grade 5 [D5–]	Grade 6 [D6–]
Students will:		
Goal Setting/Personal Challenge		
D4–6 set and achieve a long-term goal to increase effort and participation in one area of physical activity	D5–6 set long-term goals to improve personal performance based on interests and abilities	D6–6 set and modify goals to improve personal performance based on interests and abilities
D4–7 demonstrate different ways to achieve an activity goal that is personally challenging	D5–7 demonstrate different ways to achieve an activity goal that is personally challenging	D6–7 analyze and create different ways to achieve an activity goal that is personally challenging
Active Living in the Community		
D4–8 identify how people, facilities and communities influence physical activity	D5–8 create a strategy to promote participation in physical activity within the school and the community	D6–8 examine factors that influence community decisions to support and promote physical activity
D4–9 make decisions to be active within group activities or individually	D5–9 identify factors made to be active within group or individual activities on a daily basis	D6–9 choose and actively participate in a new group or individual activity that encourages daily participation

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GENERAL OUTCOME D

Students will assume responsibility to lead an active way of life.

Grade 7 [D7–]	Grade 8 [D8–]	Grade 9 [D9–]
Students will:		
Goal Setting/Personal Challenge		
D7–6 record and analyze personal goals based on interests and abilities	D8–6 monitor, revise and refine personal goals based on interests and abilities	D9–6 determine and articulate challenging personal and team goals based on interests and abilities
D7–7 evaluate different ways to achieve an activity goal, and determine a personal approach that is challenging	D8–7 evaluate different ways to achieve an activity goal, and determine personal and team approaches that are challenging for both the individual and the group	D9–7 evaluate different ways to achieve an activity goal, and determine personal and team approaches that are challenging for both the individual and the group
Active Living in the Community		
D7–8 identify local community programs that promote physically active lifestyles	D8–8 analyze community programs that promote a physically active lifestyle	D9–8 evaluate community programs that promote physically active lifestyles and how they meet local needs
D7–9 identify factors that affect choices of daily physical activity for life, and create personal strategies to overcome barriers	D8–9 analyze factors that affect choices of physical activity for life, and create personal strategies to overcome barriers	D9–9 develop strategies to counteract influences that limit involvement in physical activity

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GENERAL OUTCOME D

Students will assume responsibility to lead an active way of life.

Physical Education 10	Physical Education 20	Physical Education 30
Students will:		
Goal Setting/Personal Challenge		
D10–6 analyze current physical activity lifestyles and establish personally challenging goals to maintain participation for life	D20–6 determine short- and long-term activity goals and a timeline for their attainment that will continue to provide personal challenges	D30–6 evaluate and revise short- and long-term activity goals that will continue to provide personal challenges
D10–7 N/A	D20–7 N/A	D30–7 N/A
Active Living in the Community		
D10–8 investigate participation in community activity programs for all ages and the influences that affect participation	D20–8 perform service, leadership and volunteer work related to physical activity, in the school and/or community	D30–8 perform service, leadership and volunteer work related to physical activity, in the school and/or community
D10–9 demonstrate decision-making skills that reflect choices for daily activity within the school and the community	D20–9 evaluate the issues that affect decision making in relation to being active daily	D30–9 develop strategies to offset influences that limit involvement in physical activity

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